



# The Reading Teacher

Vol. 13, No. 2

December, 1959

## Editor

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Theme Introduction**Evaluated Experience as Research**

ON THE second day of a workshop on group instruction and individualized instruction in reading at the primary level an experienced first-grade teacher spoke as follows: "We first-grade teachers agree that both approaches to beginning reading instruction have merit and should be used. And we'd like to add some little tricks we have used, examined, and found workable." Then she presented the kinds of practices and techniques that can come only from situations where skillful teaching is being done, where techniques are varied, and studied, and where the worthwhile practices are used repeatedly and refined.

The papers on research assembled for this issue by Dr. Clymer\* are both timely and clearly presented. Throughout, the writers not only tell about research but also define the implications for classroom teachers, and show how the ideas can be converted into practices. I am sure that teachers will hail this issue as they did the similar issue on research in reading published in December, 1958. We need publications like this but we also need reports of the kind alluded to in the first paragraph.

This is a plea to teachers of read-

ing who have done "research" of a fashion as they experimented with and refined techniques for skillful differentiation of instruction. The December, 1960 issue could consist of reports from teachers about practices and procedures which they have tried, examined, and refined. The issue would, by any yardstick, be most worthwhile.

S. I. Hayakawa writes in his *Language in Action* as follows about the significance of evaluated experiences:

Experience itself is an extremely imperfect teacher. Experience does not tell us what it is we are experiencing. Things simply happen. And if we do not know what to look for in our experiences, they often have no significance to us whatever. . . . We all tend to go around the world with our eyes shut unless someone opens them for us.

At another point he alerts the reader to the fact that experiences can be as capricious as words. More than just experiencing is needed. While many of us have had experience as teachers of reading, not all of us have examined our experiences and evaluated them critically, accepting or rejecting the indicated practices. And those who have should share what they have learned, whether or not research as defined by research specialists has been done. In so many ways experience—evaluated experience—is still the best teacher.—R. G. S.

\*Theodore Clymer, Chairman of the Research Committee of the IRA, again collected and edited the papers on research.

## Recent Findings and Trends In Research on Reading

by ARTHUR E. TRAXLER

● EDUCATIONAL RECORDS BUREAU

THE PRESENT review is concerned primarily with research published during the period 1953-57.\* This period is in itself too short to indicate trends in research on reading, but when the research reported during these years is related to earlier research, a number of trends may be discerned. Some of these will be mentioned in this article. Reference will also be made to some of the more important conclusions suggested by studies carried on during this period.

*Readiness.* Evidence continues to accumulate that a child's readiness to read does not depend simply upon his chronological age or mental age, but that many elements enter into reading readiness and that it is important for children to have kindergarten training to assure the development of these elements before they enter Grade One (14, 31, 56, 83). It may be reassuring to parents and teachers of some pupils that age of learning to read seems to have only slight relationship to later reading progress (3).

*Interests.* The field of reading interests again accounted for a large

number of studies, a good many of which utilized only very elementary research techniques. The findings of many of these studies were similar to those of earlier studies, but a few new elements appeared. Interest in the reading of science seems to be a widespread and persistent characteristic of modern children (69). Positive relationship has been found between the degree of interest reading material arouses and level of comprehension of the material (8).

It may come as no surprise to teachers aware of the many interests competing for the attention of children that reading seems not to stand especially high among the school subjects preferred by children in the United States (21). In England, the reading of books apparently has good standing among children of middle-class homes although not among children of working-class homes (1).

As for reading interests of adults in other countries, one study indicated that adults in England showed a perverse preference for going to the pub over reading (19).

It may be news for Dick Tracy that there is possibly a trend among adults toward decreased reading of comics, perhaps because of increased television viewing (43). This might be called a kind of application of Gresham's Law to the reading underworld!

It has also been reported that the

\*This article is largely based on a section called "Broad Outline of Reading Research—1953-1957," which appears in Educational Records Bulletin No. 75, *Research in Reading During Another Four Years*, issued by the Educational Records Bureau in the fall of 1959. Only about one-fourth of the studies summarized in Bulletin No. 75 are listed in this article.



tastes of newspaper readers seem to be improving (57); nevertheless, it has been suggested that teachers' colleges ought to consider strengthening their program in this area (67).

*Reading and other subjects.* A considerable number of classroom projects in which reading was related to other subjects have been reported in recent years, but, since many of these were mainly descriptive, they are not as dependable a basis for conclusions as controlled studies would be (87).

Reading and spelling are rather closely correlated (47), and the teaching of spelling tends to improve word discrimination skill (59). There is positive relationship between reading and arithmetic reasoning, even when chronological age and intelligence are held constant (41).

There is some evidence that reading ability above the primary grades tends to become differentiated into rather specific abilities to read different kinds of material for different purposes (77).

*Reading and television.* Television both competes with reading for children's time and stimulates them to do more reading. The net result is about a standoff, and there seems to be little correlation between hours spent in televiewing and hours of free reading (89, 91). However, excessive viewing of TV tends to be associated with lower academic achievement (74, 91).

*Vocabulary.* Our modern environment is adding a variety of words to children's vocabularies, and it has been suggested that vocabulary lists

ought to be up-dated with new words (15). There is significant positive relationship between frequency of use of words and their familiarity (40), but there are also many individual discrepancies between word frequency and word knowledge (22). It has been found that systematic instruction in word attack brings about improvement in reading comprehension (6).

*Phonics.* Various influences, including publication of a vigorous general attack upon reading programs that tend to neglect the phonetic elements of words, have tended to revive research on phonics which had languished for several years (33). The indications of these studies are that well-planned systematic instruction in phonics is needed, but that no one system of word analysis is the most effective; that the needs of pupils for instruction in phonics vary widely; and that phonics should be taught functionally and related to individual needs (9, 10, 52, 71, 80, 92).

Results of earlier studies indicating positive relationship between phonetic ability and reading ability were supported by findings in a number of recent studies (42, 54, 68).

*Tests in a reading program.* Few new reading tests have been issued except for two tests published so recently that research on them, other than that of the authors, is not yet available (23, 76).

Reading tests need to be supplemented with tests of intelligence or scholastic aptitude. There is some evidence of a distinct pattern for re-

tarded readers on the Wechsler Intelligence Scale for Children (2). An individual intelligence test, such as the WISC or Stanford-Binet Scale, is generally believed to be preferable for the measurement of the reading potential of retarded readers, and there is evidence that group intelligence tests do not adequately approximate the results of individual tests for such pupils (12). It may be thought that a "culture-free" test is one kind of group intelligence test that would be particularly useful in a reading program, but research casts some doubt on this supposition (44, 72).

*Speed of reading.* Some evidence was added to that of earlier studies indicating that speed of reading depends more upon such factors as concept formation, organizational ability, and general vocabulary than upon perceptual factors (65). However, lack of competence in perceptual recognition of printed verbal symbols was found in one study to handicap the reading of many college students and adults, and it was suggested that elementary schools could make a valuable contribution through more attention to training in perceptual skill (18).

*Controlled reading.* A large number of mechanical devices for controlling or pacing reading speed have been made available through commercial sources in recent years. There is a dearth of research on the value of most of these instruments, but a few producers seem committed to the building up of research on their products (27).

The general conclusion from recent studies of reading rate controllers is neither favorable nor unfavorable to these mechanical aids (5, 79, 85, 88, 93). Research generally indicates that improvement in reading achievement accompanies the use of these devices, but there is lack of convincing evidence that they add to the improvement that could be made without their use. At the present stage of research on mechanical aids to the teaching of reading, there is no objective basis for definite, emotional statements either for or against these instruments. Such improvement as accompanies their use may be due to the sharpening of visual discrimination rather than to training in regularity of eye movements and reduction of regressive movements (82).

*Eye movements.* In contrast to the many studies of eye movements during the reading process carried on a quarter of a century ago, comparatively few such studies were reported recently. An extensive study of eye-movement records of mature readers of fourteen different languages revealed similar patterns of eye movements, with words recognized as wholes or word groups, notwithstanding the wide differences in the form and structure of the languages (38).

*Visual defects.* Results consistent with earlier studies were reported indicating that, so far as the usual school groups are concerned, there is little, if any, relationship between visual anomalies and measured reading achievement (29). However,

refractive error may contribute to the reading failure of some pupils in the elementary school (26).

*Auditory and speech defects.* Further evidence was accumulated that auditory acuity and discrimination bear only slight relationship to word recognition and reading ability as measured by tests (62, 66, 90). This does not mean, however, that *listening* ability is not related to reading ability. There is a rather high correlation between these two basic means of communication (7).

Some clinical evidence was reported in support of Orton's theory of a generalized language disability which manifests itself in disorders of speech and reading (24).

*Dominance and reversals.* Interest in cerebral dominance and reversals as causal factors in reading difficulty has declined in recent years, and the amount of research in this area has correspondingly decreased. Evidence continues to accumulate that reversal tendencies are usual and normal among little children. There is some indication that, if reversal tendencies persist beyond the age of nine, they may be a source of difficulty (28, 37, 45). The hypothesis has been advanced that reversals may be symptomatic of desire for attention and that they call for an inquiry into the emotional characteristics of the child (60).

*Reading and personality qualities.* Existence of a relationship of reading and language difficulties to emotional adjustment has long been recognized, but cause-and-effect relationships are often obscure. Lan-

guage difficulties may be causes, concomitants, or results of personality factors (70). Five personality patterns pertinent to the understanding of failure in reading have been identified (81). Some clinical evidence of the effect of therapy in cases of severe reading retardation continues to be reported (32, 50, 75).

*Reading achievement and other factors.* Contrary to a persistent belief among laymen that a child's ability to read depends almost entirely on how good his teacher is, research repeatedly underlines the fact that reading achievement is a product of numerous factors. One of the most important of these factors is verbal intelligence, particularly that aspect of intelligence involving ability to deal with abstractions (13, 17).

*Typography.* The extensive research on typography available from earlier years was supplemented by a number of studies during the period under review. Among the suggestions resulting from these studies were that large books and journals ought to be printed with a wider inner margin in order to avoid excessive curvature (49); that tables should be printed in at least eight-point type with clear separation of columns and lines (86); and that typographical arrangements involving the grouping of words into thought units may be desirable (55).

*Diagnosis.* Attention was called in research studies to the possible importance of kinesthetic ability in diagnosis of reading difficulties (36),

to differences between good and poor readers in emotional maturity (73), to oral reading skill as a criterion of reading ability (63), and to the advisability of investigating brain damage as a possible causal factor in cases of severe reading retardation (64).

*Remedial and corrective work.* During the period covered by this review a fairly large number of studies reporting successful remedial and corrective instruction were added, particularly at the college level, to the numerous studies reported in this area in earlier years. Some of these studies indicated that the remedial training not only improved reading achievement, but had a favorable effect upon academic achievement as well (11, 48, 58). There is some evidence that it is not unreasonable to expect that, on the average, two months' gain in reading will result from each month's attendance at a reading center (53), although gains are likely to become more significant after instruction has been going on for more than one term (35).

*Developmental reading.* In recent years increasing attention has been given to programs of developmental reading for all pupils, as contrasted with remedial programs for retarded readers only, and this interest is reflected in the amount of research carried on. Some of these studies have been concerned with the relative merits of different procedures of organization and teaching of reading. Some of the points brought out are that homogeneous grouping contributes to reading progress (4, 34),

and that a developmental program at the high school level calls for close cooperation among subject matter teachers (78). Attention was also called to the fact that the most important problem in planning a reading program is that of individual differences (25).

*Adult reading.* The desire of many adults, particularly business executives, to improve their reading speed and comprehension has stimulated a good deal of research on the reading of mature persons. The interest of adults in raising the level of their own reading is well taken, since there is evidence that the average adult reading level is only about Grade Nine and that the reading ability of approximately 15 per cent of the adults in the United States is below Grade Four (39). Although doubts are sometimes voiced over the possibility of improvement of the reading of mature persons whose habits are thoroughly established, groups of adults have been found to make about as much growth in reading skills during laboratory training as groups of undergraduate college students (46).

*Readability.* One of the more active areas of reading research continues to be that of the development and application of readability formulas, such as those of Lorge, Flesch, Dale-Chall, Yoakam, Spache, and others. Results of recent studies have tended to be rather favorable to the reliability and validity of readability formulas (30, 61). There is some indication, however, that cognitive and motivational influences ought



to be taken into consideration to a greater degree than they are in a mechanical formula for estimating reading difficulty. The "cloze procedure," which requires the subject to guess missing words in the context of reading material, has been proposed as a measure of the aggregate influences of the various factors affecting comprehension of reading material (84). As yet, there is not much research on this procedure.

An intriguing historical note is found in the fact that application of a reading formula to an extensive list of best sellers published between 1662 and 1945, including a group of children's books, revealed no overall trend in difficulty during this long period (20).

*Reading—Today and Yesterday.* Research on the question of how the reading achievement of present-day pupils compares with that of pupils at the same grade levels years ago continues to be fragmentary. This situation is almost inevitable, since most reading tests, as well as other tests, have changed during the last twenty-five or thirty years, and it is only by the most fortuitous circumstance that direct comparisons between test results can be made over a period long enough to have any significant bearing on this question. The tenor of such evidence as is available is slightly in favor of today's pupils (16, 51), but there is not enough substantial research to give aid and comfort to writers for the public press or platform speakers on either side of this question. Reading specialists and teachers of read-

ing could wish it otherwise, but research outcomes, or the lack of them, must be viewed objectively and realistically or they are worse than useless.

*Needed research.* Areas in which further carefully planned and thorough research seems especially to be needed include the effect of improved reading achievement upon achievement in other areas of the curriculum; the value of instruction in phonics and the extent of such instruction needed by pupils of different levels of ability and maturity; the development of reliable and valid instruments for differential measurement of various aspects of comprehension; the effect of improvement in listening ability on reading ability and vice versa; the relative value of mechanical devices and freer methods in a reading program; the relationship of personality and emotional qualities to different kinds and levels of reading difficulties; the relationship of thorough diagnosis to reading progress and the improvement of diagnostic procedures; the relative merits of remedial and developmental reading programs; study of the question of how much difference a thorough reading program makes in the school and out-of-school adjustment and progress of the individual; and exploration of ways in which modern media of communication, such as television, may be used to aid, rather than to deter, reading development.

### References

1. Abrams, Mark. "Child Audiences for Television in Great Britain," *Journal-*



- ism Quarterly, XXXIII (Winter, 1956), 35-41.
2. Altus, Grace T. "A WISC Profile for Retarded Readers," *Journal of Consulting Psychology*, XX (Apr., 1956), 155-56.
3. Anderson, Irving H., Hughes, Byron O., and Dixon, W. Robert. "Age of Learning to Read and Its Relation to Sex, Intelligence, and Reading Achievement in the Sixth Grade," *Journal of Educational Research*, XLIX (Feb., 1956), 447-53.
4. Barbe, Walter B., and Waterhouse, Tina S. "An Experimental Program in Reading," *Elementary English*, XXXIII (Feb., 1956), 102-04.
5. Barry, Robert F., and Smith, Paul E. "An Experiment in Ninth-Grade Reading Improvement," *Journal of Educational Psychology*, XLV (Nov., 1954), 407-14.
6. Bedell, Ralph, and Nelson, Eloise S. "Word Attack as a Factor in Reading Achievement in the Elementary School," *Educational and Psychological Measurement*, XIV (Spring, 1954), 168-75.
7. Berg, Paul. "Reading in Relation to Listening," *Evaluating College Reading Programs*, The Fourth Yearbook of the Southwest Reading Conference for Colleges and Universities, pp. 52-60. (Oscar S. Causey and Albert J. Kingston, Editors). Fort Worth, Texas: Texas Christian University Press, 1955.
8. Bernstein, Margery R. "Relationship between Interest and Reading Comprehension," *Journal of Educational Research*, XLIX (Dec., 1955), 283-88.
9. Betts, Emmett A. "Phonics: Practical Considerations Based on Research," *Elementary English*, XXXIII (Oct., 1956), 357-71.
10. Betts, Emmett A. "Phonics: Syllables," *Education*, LXXIX (May, 1959), 557-63.
11. Blake, Walter S., Jr. "Do Probationary College Freshmen Benefit from Compulsory Study Skills and Reading Training?" *Journal of Experimental Education*, XXV (Sept., 1956), 91-93.
12. Bliesmer, Emery P. "A Comparison of Results of Various Capacity Tests Used with Retarded Readers," *Elementary School Journal*, LVI (May, 1956), 400-02.
13. Bond, Guy L., and Clymer, Theodore W. "Interrelationship of the SRA Primary Mental Abilities, Other Mental Characteristics, and Reading Ability," *Journal of Educational Research*, XLIX (Oct., 1955), 131-36.
14. Bradley, Beatrice E. "An Experimental Study of the Readiness Approach to Reading," *Elementary School Journal*, LVI (Feb., 1956), 262-67.
15. Bryan, Fred E. "How Large Are Children's Vocabularies?" *Elementary School Journal*, LIV (Dec., 1953), 210-16.
16. Burke, Norris F., and Anderson, Kenneth E. "A Comparative Study of 1939 and 1950 Achievement Test Results in the Hawthorne Elementary School in Ottawa, Kansas," *Journal of Educational Research*, XLVII (Sept., 1953), 19-33.
17. Burks, Harold F., and Bruce, Paul. "The Characteristics of Poor and Good Readers as Disclosed by the Wechsler Intelligence Scale for Children," *Journal of Educational Psychology*, XLVI (Dec., 1955), 488-93.
18. Buswell, G. T. "The Relationship between Perceptual and Intellectual Processes in Reading," *California Journal of Educational Research*, VIII (May, 1957), 99-103.
19. Cauter, T., and Downham, J. S. "Newspapers and Magazines," "Books and Libraries," *The Communication of Ideas: A Study of Contemporary Influences on Urban Life* (Chaps. X, XI). Published for Readers Digest Association. London: Chatto and Windus, 1954.
20. Craig, James C. "The Readability of Children's Literature," *A Report of the Tenth Annual Conference on Reading, University of Pittsburgh, July 12-23, 1954*, pp. 113-24. Pittsburgh: University of Pittsburgh Press, 1954.
21. Cutts, Norma E., and Moseley, Nicholas. "Bright Children and the Curriculum," *Educational Administration and Supervision*, XXXIX (Mar., 1953), 168-73.
22. Dale, Edgar. "The Problem of Vocabulary in Reading," *Educational Research Bulletin*, Ohio State University, XXXV (May 9, 1956), 113-23.
23. Davis, Frederick B., and Davis, Charlotte Croon. *Davis Reading Test*. New York: Psychological Corporation, 1959.
24. DeHirsch, Katrina. "Gestalt Psychology as Applied to Language Disturbances," *Journal of Nervous and Mental Diseases*, CXX (Sept.-Oct., 1954), 257-61.
25. Drews, Elizabeth. "Individual Differences: The Basic Problem in Planning a Reading Program," *The English Record* (Winter, 1956).
26. Eames, Thomas H. "The Influence of Hypermetropia and Myopia on Reading Achievement," *American Journal of Ophthalmology*, XXXIX (Mar., 1955), 375-77.
27. Edfeldt, Ake W. *Reading Reversal and Its Relation to Reading Readiness*. Research Bulletins from Institute of Education, University of Stockholm, No. 1, Jan., 1955.
28. Edson, William H., Bond, Guy L., and

- Cook, Walter W. "Relationships between Visual Characteristics and Specific Silent Reading Abilities," *Journal of Educational Research*, XLVI (Feb., 1953), 451-57.
29. Educational Development Laboratories. *The Evolution and Growth of Controlled Reading Techniques*. Third Edition. Huntington, N. Y.: Educational Development Laboratories, 1958.
  30. England, George W., Thomas, Margaret, and Paterson, Donald G. "Reliability of the Original and the Simplified Flesch Reading Formulas," *Journal of Applied Psychology*, XXXVII (Apr., 1953), 111-13.
  31. Fast, Irene. "Kindergarten Training and Grade I Reading," *Journal of Educational Psychology*, XLVIII (Jan., 1957), 52-57.
  32. Fisher, Bernard. "Group Therapy with Retarded Readers," *Journal of Educational Psychology*, XLIV (Oct., 1953), 354-60.
  33. Flesch, Rudolf. *Why Johnny Can't Read*. New York: Harper, 1955. Pp. 222.
  34. Floyd, Cecil. "Meeting Children's Reading Needs in the Middle Grades: A Preliminary Report," *Elementary School Journal*, LV (Oct., 1954), 99-103.
  35. Forlano, George, and Wrightstone, J. Wayne. "Measuring the Effectiveness of Special Reading Instruction in Selected Vocational High Schools," *High Points*, XXXVIII (Mar., 1956), 31-36.
  36. French, Edward L. "Kinesthetic Recognition in Retarded Readers," *Educational and Psychological Measurement*, XIII (Winter, 1953), 636-54.
  37. Furness, Edna L. "Perspective on Reversal Tendencies," *Elementary English*, XXXIII (Jan., 1956), 38-41.
  38. Gray, William S. "A Study of Reading in Fourteen Languages," *The Teaching of Reading and Writing: An International Study*, pp. 53-59. Monographs on Fundamental Education. Paris, France: UNESCO House, 19 Kleber Avenue, 1956. (Distributed in United States by Scott, Foresman.)
  39. Gray, William S. "How Well Do Adults Read," *Adult Reading*, Chap. II. Fifty-fifth Yearbook of the National Society for the Study of Education, Part II. Chicago: University of Chicago Press, 1956.
  40. Hall, John F. "Learning as a Function of Word-Frequency," *American Journal of Psychology*, LXVII (Mar., 1954), 138-40.
  41. Harper, R. J. C. "Reading and Arithmetic Reasoning: A Partial Correlation and Multiple Regression Analysis," *Alberta Journal of Educational Research*, III (June, 1957), 81-86.
  42. Harrington, Sister Mary James, and Durrell, Donald D. "Mental Maturity versus Perception Abilities in Primary Reading," *Journal of Educational Psychology*, XLVI (Oct., 1955), 375-80.
  43. Haskins, Jack B., and Jones, Robert L. "Trends in Newspaper Reading: Comic Strips, 1949-54," *Journalism Quarterly*, XXXII (Fall, 1955), 422-33.
  44. Justman, Joseph, and Aronow, Miriam. "The Davis-Eells Games as a Measure of the Intelligence of Poor Readers," *Journal of Educational Psychology*, XLVI (Nov., 1955), 418-22.
  45. Kennedy, Helen. "Reversals, Reversals, Reversals!" *Journal of Experimental Education*, XXIII (Dec., 1954), 617-70.
  46. Kinne, Ernest W. "Reading Improvement for Adults," *College English*, XV (Jan., 1954), 222-28.
  47. Mason, Geoffrey P. "Word Discrimination and Spelling," *Journal of Educational Research*, L (Apr., 1957), 617-21.
  48. McDonald, Arthur S., and Pauk, Walter J. "Teaching College Freshmen to Read," *Phi Delta Kappan*, XXXVIII (Dec., 1956), 104-09.
  49. McNamara, Walter J., Paterson, D. G., and Tinker, Miles A. "The Influence of Size of Type on Speed of Reading in the Primary Grades," *Sight-Saving Review*, XXIII (Spring, 1953), 28-33.
  50. Mehus, Hilda. "Learning and Therapy," *American Journal of Orthopsychiatry*, XXIII (Apr., 1953), 416-21.
  51. Miller, Vera V., and Lanton, Wendell C. "Reading Achievement of School Children—Then and Now," *Elementary English*, XXXIII (Feb., 1956), 91-97.
  52. Mills, Robert E. "An Evaluation of Techniques for Teaching Word Recognition," *Elementary School Journal*, LVI (Jan., 1956), 221-25.
  53. Mouly, George J., and Grant, Virginia F. "A Study of the Growth to be Expected of Retarded Readers," *Journal of Educational Research*, XLIX (Feb., 1956), 461-65.
  54. Mulder, Robert L., and Curtin, James. "Vocal Phonic Ability and Silent Reading Achievement: A First Report," *Elementary School Journal*, LVI (Nov., 1955), 121-23.
  55. Nahinsky, Irwin D. "The Influence of Certain Typographical Arrangements Upon Span of Visual Comprehension," *Journal of Applied Psychology*, XL (Feb., 1956), 37-39.
  56. Nila, Sister Mary. "Foundations of a Successful Reading Program," *Education*, LXXXIII (May, 1953), 543-55.
  57. Nixon, Raymond B. "Changes in Reader Attitudes toward Daily Newspapers," *Journalism Quarterly*, XXXI (Fall, 1954), 421-33.

58. O'Bear, Harry H. "Changes in the Academic Achievement of Matched Groups of Remedial Reading and Non-remedial Reading Students at Indiana University," *Studies in Education* (Thesis Abstract Series), No. 6, 1954, pp. 151-56. Bloomington, Ind.: School of Education, Indiana University, 1955.
59. Osburn, Worth J. "Teaching Spelling by Teaching Syllables and Root Words," *Elementary School Journal*, LV (Sept., 1954), 32-41.
60. Park, George E. "Mirror and Reversed Reading," *Journal of Pediatrics*, XLII (Jan., 1953), 120-28.
61. Peterson, Margaret J. "Comparison of Flesch Readability Scores with a Test of Reading Comprehension," *Journal of Applied Psychology*, XL (Feb., 1956), 35-36.
62. Poling, Dorothy L. "Auditory Deficiencies of Poor Readers," *Clinical Studies in Reading: II*, 107-11. Supplementary Educational Monographs, No. 77. Chicago: University of Chicago Press, 1953. Pp. x + 189.
63. Preston, Ralph C. "The Reading Status of Children Classified by Teachers as Retarded Readers," *Elementary English* XXX (Apr., 1953), 225-27.
64. Preston, Ralph C., and Schneyer, J. Wesley. "The Neurological Background of Nine Severely Retarded Readers," *Journal of Educational Research*, XLIX (Feb., 1956), 455-59.
65. Reed, James C., and Pepper, Roger S. "The Interrelationship of Vocabulary, Comprehension, and Rate among Disabled Readers," *Journal of Experimental Education*, XXV (June, 1957), 331-37.
66. Reynolds, Maynard C. "A Study of the Relationships between Auditory Characteristics and Specific Silent Reading Abilities," *Journal of Educational Research*, XLVI (Feb., 1953), 439-49.
67. Rogers, James L. "Prospective Teachers' Attitudes Toward Freedom of Information," *Journalism Quarterly*, XXXII (Spring, 1955), 169-76.
68. Rudisill, Mabel. "Interrelations of Functional Phonic Knowledge, Reading, Spelling, and Mental Age," *Elementary School Journal*, LVII (Feb., 1957), 264-67.
69. Rudman, Herbert C. "The Informational Needs and Reading Interests of Children in Grades IV through VIII," *Elementary School Journal*, LV (May, 1955), 502-12.
70. Russell, David H. "Interrelationships of the Language Arts and Personality," *Elementary English*, XXX (Mar., 1953), 167-80.
71. Russell, David H. "Teachers' Views on Phonics," *Elementary English*, XXXII (Oct., 1955), 371-75.
72. Russell, Ivan L. "The Davis-Eells Test and Reading Success in First Grade," *Journal of Educational Psychology*, XLVII (May, 1956), 269-70.
73. Schubert, Delwyn G. "Comparison between Best and Poorest Classroom Readers," *Elementary English*, XXXIII (Mar., 1956), 161-62.
74. Scott, Lloyd F. "Television and School Achievement," *Phi Delta Kappan*, XXXVIII (Oct., 1956), 25-28.
75. Seeman, Julius, and Edwards, Benner. "A Therapeutic Approach to Reading Difficulties," *Journal of Consulting Psychology*, XVIII (Dec., 1954), 451-53.
76. *Sequential Tests of Educational Progress (STEP)*, Forms 1A and B; 2A and B; 3A and B; 4A and B. Princeton, N. J.: Educational Testing Service, 1956, 1957.
77. Shores, J. Harlan, and Saupe, J. L. "Reading for Problem-Solving in Science," *Journal of Educational Psychology*, XLIV (Mar., 1953), 149-58.
78. Smith, Elizabeth B. (Chairman of the Ninth Year Committee for Walton High School). "A Reading Experiment," *High Points*, XXXIX (Jan., 1957), 12-31.
79. Smith, Henry P., and Tate, Theodore R. "Improvements in Reading Rate and Comprehension of Subjects Training with the Tachistoscope," *Journal of Educational Psychology*, XLIV (Mar., 1953), 176-84.
80. Smith, Nila B. "What Research Tells Us About Word Recognition," *Elementary School Journal*, LV (Apr., 1955), 440-46.
81. Spache, George D. "Personality Characteristics of Retarded Readers as Measured by the Picture-Frustration Study," *Educational and Psychological Measurement*, XIV (Spring, 1954), 186-92.
82. Spache, George D. "A Rationale for Controlled Reading," *Reading for Effective Living*, pp. 190-94. International Reading Association Conference Proceedings, Vol. III. New York: Scholastic Magazines, 1958.
83. Sutton, Rachel S. "A Study of Certain Factors Associated with Reading Readiness in the Kindergarten," *Journal of Educational Research*, XLVIII (Mar., 1955), 531-38.
84. Taylor, Earl A. *Eyes, Visual Anomalies, and the Fundamental Reading Skill*. New York: Reading and Study Center, 1959. Pp. xiv + 204.
85. Thompson, Warren C. "A Book Versus

- Machine Experiment in Adult Reading Improvement," *College English*, XV (May, 1954), 471-73.
86. Tinker, Miles A. "Effect of Sloped Text Upon the Readability of Print," *American Journal of Optometry and Archives of American Academy of Optometry*, XXXIII (Apr., 1956), 189-95.
87. Townsend, Agatha. "Interrelationships between Reading and Other Language Arts Areas," *Elementary English*, XXXI (Feb., 1954), 99-109.
88. Wedeen, Shirley U. "Mechanical Versus Non-mechanical Reading Techniques for College Freshmen," *School and Society*, LXXIX (Apr., 1954), 121-23.
89. Wells, Charles A., and Lynch, Timothy J. "The Amount of Free Reading Engaged in by Intermediate Grade Pupils Who Have Viewed Television for One Year or More," *Journal of Educational Research*, XLVII (Feb., 1954), 473-77.
90. Wheeler, Lester R., and Wheeler, Viola D. "A Study of the Relationship of Auditory Discrimination to Silent Reading Abilities," *Journal of Educational Research*, XLVIII (Oct., 1954), 103-13.
91. Witty, Paul. "Children, TV, and Reading," *The Reading Teacher*, XI (Oct., 1957), 11-16.
92. Witty, Paul A., and Sizemore, Robert A. "Reading the Comics: A Summary of Studies and an Evaluation—I, II, and III," *Elementary English*, XXXI (Dec., 1954), 501-06; XXXII (Jan., Feb., 1955), 43-49, 109-14.
93. Wooster, George F. "An Experimental Study of the Reading-Rate Controller," *Journal of Educational Psychology*, XLV (Nov., 1954), 421-26.

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# Implications of Research on Children's Concepts

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ONE HAS ONLY to look at the more than 2500 references in Dale and Reichert's revised *Bibliography of Vocabulary Studies* (7) to be properly awed by the interest which investigators have shown in the vocabulary and concepts of children. Inflated egos may require an additional look at Russell's 900 references in *Children's Thinking* (22) to realize that a quick answer to the problem of children's ideas—the ways they are formed, and children's experiences with the symbols which represent them—is farther from our grasp than the moon today. The purpose of this article is to give the reader something of the knowledge that is available to teachers about the most basic ingredients in the reading program: the ideas which the child brings to the page and the ideas which he attaches to the words in their relationships.

## What a Concept Is

Mr. Webster attempts to settle what we are talking about by describing a concept as "a mental image of a thing formed by generalization from particulars . . . an idea of what a thing in general should be" (36). Russell (22) helps by speaking of concepts as dealing with objects (chair, fish), qualities (honest, clean), and relationships (under, when, because). Jarolimek and Foster (16), refer to concepts as

definite (one-half teaspoon of salt) and indefinite (a generous helping of salt). (Generous for what, generous in whose opinion?)

Facets of a concept can be numerous. Take the word *paws*. As a spoken word, of course, it must first be untangled from *pause*. Position makes a difference (front or back), kind (raccoon or dog), shape (long, broad), size (big, little), composition (three-toed, bare, furry), feeling (cold, rough), sound (thumping, stealthy), time (old, young), number (many, few). You can probably think of others.

The facets of a concept can sometimes be illuminated by pairs of words and their relationships to each other: ceramic—dish (general—specific), father—child (numerous facets), fish—fowl (flip versus flap), in—on (position), peace—war (complex opposites), glory—prize (state and symbol).

Russell (22, p. 162) reminds us that a concept may be known thoroughly (toothbrush?), partially (parents?), inaccurately (mother-in-law?), or not at all (income tax regulations?). He attempts to explore children's grasp of concepts by resorting to questions requiring classification, function, definition, appearance or description, characteristics, association with other words, and varied meanings of the same word (23).



How do concepts affect reading? Chall, in *Readability* (5), points out that the more different words there are on a page, the more ideas, the more involved the sentence structure, the more abstract the words, the more remote the words from fundamental life experience—the greater the difficulty of the material for the reader. Authors can throw roadblocks before the concept builder. Since all types of reading matter do not require the same quantity or quality of comprehension, the varied reading activities in and out of school demand a readiness of the child for many degrees of challenge.

### How Concepts Are Formed

Some insight into the teaching of concepts may be gained by consideration of the manner in which concepts are formed. Russell points out that concepts are often developed slowly “out of percepts, memories, and images, and their development is aided greatly by language or other symbols.” Some concepts help explain other concepts: “Concepts of time help explain concepts of social custom . . . aesthetic and humorous concepts grow in relation to social concepts” (22, p. 162). (Slipping on a banana peel is funny because it violates the social idea of the dignity of man.) He further remarks that concepts “seem to move along a continuum from simple to complex, from concrete to abstract, from undifferentiated to differentiated, from discreet to organized, from egocentric to more social” (22, p. 249). The parenthetical remarks

throughout this article are concrete examples offered to ease the shock of the abstractions which are being discussed. (I am reminded of the child skating along on one roller skate, his other foot occasionally on the “concrete” to push the “abstract” along.)

In developing his concepts “the child employs naming, counting, measuring, discriminating, abstracting, and generalizing.” He must recognize the common elements in objects or situations, setting aside unrelated items in the process. (If he has known only short-haired dogs, he must mentally give a shaggy dog a haircut before he can see the generalization “dog”; but, at the same time, he must be ready to add shagginess to his original concept of what a dog can be.) The child gains concepts by an active process, during “sensory impression, muscular activity, motor manipulation, questioning, reading, and problem solving.” The process “involves inductive thinking and, at least sometimes, deductive and creative thinking” (22, p. 249).

In books, concepts can be built by pictures which accompany the text, and by the way the words are used in the verbal context. Capitalization and punctuation may hint at the relationship of a strange word to those surrounding it. (“The Keeper of the Privy Seal” is clearly—to experienced readers—a compact title because of the capitalization.)

### Factors Influencing Concept Development

What factors influence the devel-

opment of a concept? Clearly, a concept is based upon experiences, and the more direct these are, the better (28). There may be experiences with objects, processes, and lower-level concepts upon which the needed concept is built, or experiences with the world itself in hearing, speaking, reading, and writing situations. Of course, the mere use of a word by a child is no assurance of his grasp of its meaning. This goes for college students as well as others (18). That the teacher must have a part in book experiences is shown by the fact that many of the common words of multiple meanings used in primary readers are not accurately comprehended by primary grade children (12). If this is true of a controlled vocabulary, how much more true it must be of children's literature in general.

Children of higher socio-economic status tend to score higher on vocabulary tests than children of lower-socio-economic status (32). The opportunities which accompany the status partially account for this difference.

Age, probably a reflection of experience, also has been found to be a factor in concept development. Durkin (10), in investigating children's ideas of justice, found that older children (junior-senior high school) tended to be aware of many more factors to be considered in meting out justice. (He swatted me I'll swat him back . . . but he didn't mean it. Somebody pushed him. His arm just flew back. He thought I was that other guy.) Kruglov (17)

found that, in Grades 3 through 8, younger children chose concrete definitions for words they were given, while older children chose more often the abstract definitions or synonyms of the words.

Intelligence, which makes it possible for a child to benefit from experience, to observe, to remember, to generalize, to deduce, to discriminate, and to hold images in mind, is also a factor in concept development (22, p. 25). While Durkin found no relationship between children's concepts of justice and their levels of intelligence, it is sensible to suppose that this lack reflects variations in education and opportunity rather than the unimportance of native ability to one's grasp of the environment. Similarly, McCullough (19), finding children of varied intelligence rather uniformly poor in getting meaning from context clues, supposed this finding to reflect the uniform lack of attention to this skill. So direct teaching as well as intelligence can be a factor.

Sex, with its cultural overtones, shows some influence in concept building. In Russell's study of the dimensions of children's vocabulary (23), boys showed some superiority to girls in their knowledge of vocabulary in science, sports, hobbies, and recreation. (He didn't examine the groups on the properties of Vel, Genie, and Mr. Clean.) Templin (32), studying children aged three through eight, found that the older boys had achieved greater average word knowledge than the older girls, while the latter had better average

articulation. (The girls can say it better but the boys know what it means!)

Well-meaning attempts to generalize about factors influencing concept building are defied by the presence of individual differences. Differences are extensive in the same age group and become greater with the age of the children concerned (22). Fennema (11) reported different degrees of imagery among children, which would affect not only the development of concepts, but the ability to hold in mind the symbols representing them. Davis (8) stated that speech maturity had a direct bearing on meaning-getting in early reading activities; and the variations among children in speech at early ages is well known. Russell cites the importance of emotional factors, tensions, needs, and the presence of problems to be solved.

Written material itself contributes to the ease or difficulty with which a child develops understandings. Concepts explained by an author through difficult vocabulary and involved sentence structure may never filter through to the reader (30). Too much to learn on a page, and too frequent use of indefinite terms may result in inaccurate or incomplete concepts, or in none at all (27). On the positive side, Traxler reminds us that wide reading offers the opportunity for a reader to infer meanings from context (34); and Werner (37), that a word may lose its lexical meaning and gain new facets through context. On the negative side, Sachs (24) and others report

that meanings are not always gained from context, whether the fault be with the difficulty of the passage, the absence of context clues, the lack of reading ability, or the lack of experience or effort on the part of the reader.

### What Teachers Can Do

*Materials.* The literature on the development of concepts suggests a number of guide lines for teachers. Some of these relate to material. Clyse (6), studying occupational ideas in eight third-grade readers, found over a thousand incidents which could be used to teach attitudes, skills, and appreciations essential for vocational success. Through discussion and other experiences teachers can capitalize on what is offered and round out partially-developed concepts.

In choosing materials for children we should realize that the presence of modifiers means enriched meanings, perhaps more complicated ideas, and, in either case, something to be asked about and noticed by the children. Books containing technical words, common words used in a technical sense, uncommon words used in the general vocabulary of the author, and different words used interchangeably for the same meaning, mean a job of concept-building and some direct teaching.

If a choice is possible between interestingly written material and material of the same content written in a less interesting way, the former selection means better understanding on the part of the child (2).

*Understandings.* Understandings can be built in a classroom which provides materials to be seen, handled, operated, discussed. An actual object, short of an elephant, is preferable to a movie (39), but films are indeed helpful in clarifying book meanings (21, 38). Our ears are tired of the cliché, "providing rich experiences for the child," and probably should be. We need to put a point on this weapon, giving experiences with pointed questions for the development of specific meanings for the child's current reading. First hand experiences should be used as much as possible (22).

If we are dealing with children of lower socio-economic level, we should expect to have to engage in more concept building (22). This, of course, does not mean that we should assume that children of higher socio-economic status have fully-developed concepts. We should, rather, ask them for meanings to see whether the grasp exists.

It is important that we ourselves speak clearly in naming the concept, and that we require clear speech by the children (8). *Goad* and *goat* are not the same, though they both provide propulsion from the rear.

*Motivation.* Since basic needs and favorable feelings grease the wheels of learning, we should as much as possible use the "hot moment," the time of keen interest, for providing the learning. (However, we should not be above starting a few fires ourselves.) The study of concepts which children's current text and recreational reading utilize, with the chil-

dren fully aware that these are the needed concepts, means more efficient learning.

*Group learning.* In working with groups we must expect a wide range of concept-grasp. We should use the children who do know, to explain, dramatize, demonstrate, experiment, and illustrate for those who do not know. ("Who can tell us about——? Willy, didn't I see you watching that bulldozer yesterday?")

Sometimes in dealing with the meaning of a word, we can write down on the chalkboard the different definitions the children in the group offer (21), then help them seek verification (studying the actual object, rerunning the film, going to the dictionary, etc.), and choose or compose a proper definition.

Since brighter pupils seem to grasp prefix, root, and suffix meanings more readily than average or dull children (20), we might use the brighter pupils to lead in the group study of these aspects of word structure and meaning.

Group approaches to concept building are particularly valuable. Even we, "the omniscient," cannot with our one-life experience compensate for the facets other minds might bring to group discussion.

*Exploration of a concept.* Children need guidance in studying meanings. In dealing with multiple meanings of words (9), such as *up*, we can say, "Who can show us what up means in this sentence? (He went up the street.) In this one?" (He reached up to the high shelf). The presence of a word of many mean-



ings is an opportunity for introducing the other common meanings of it. Younger children may have to demonstrate meanings rather than express them in words, but gradually they should be given the defining words to use, and be encouraged to use them.

In probing for the meaning of an abstraction like *justice* (10), we should probably ask questions which make children aware of the factors which affect it. "Why did he do it? What had just happened to him? What would this make him think?" Discussions of many situations involving justice gradually build the complex meaning.

To help children generalize (22), we must give them a number of examples to study for their common characteristics. ("What is true about all of these Fidos, Neros, Rovers, etc.?"—in getting at "dogness.") In the process of deduction we can help by saying, "If this is what a dog is, do you think this (showing another example) is a dog? Why or why not?" Measuring how many pints of water can be poured into a quart jar gives concrete evidence of the relationship between pints and quarts. Counting the number of eggs (Watch out there!) in a dozen builds the idea of dozen. Naming the parts of an object observed requires more thorough observation than a child might ordinarily give.

We must remember that we build more easily from the concrete to the abstract. In so doing we must be sure that we start with what is concrete to the child, not just to us.

*Prize* may be to us a concrete aspect of *achievement*; but to the child prize may be the as-yet unrealized abstraction referring to the doughnut he won yesterday and the marble he won the day before.

*Acquisition of concepts.* The concepts we get from reading may not automatically become the property of the children who read this same material (16). Jarolimek and Foster report that comparison, problem-solving, contrast, and interpretation of sentence meanings are useful techniques in word study. Sutton's study (31) suggests that we base word exercises on words the children encounter in their texts, have the children find the meanings in the dictionary, and build sentences using the words with these various meanings. Werner (37) proposes that we let children know that the meaning of a word changes with use through the years, introducing them to such books as Epstein's *First Book of Words* (Watts, 1954), Lambert's *Our Language* (Lothrop, 1955), and Laird's *Tree of Language* (World, 1957). Bloomer's study (3) leads to the conclusion that we should pay attention to modifiers: "What does the word *hungry* do to your idea of the lion?" Children can engage in creative activity with modifiers—changing the wording to other possibilities (the well-fed lion) and discussing what happens to the meaning.

We can hope that wide reading will build concepts, but cannot expect that all will be achieved by this means (34). Setting a standard of understanding clearly what is read,



we can encourage children to bring puzzling words and expressions in context to the class for discussion. Many studies, including those by Vineyard and Massey (35), Gray and Holmes (13), show the effectiveness of direct systematic study of word meanings. Taking cue from several studies, we can require the classification of words (4), an expression of the function of an object, a definition or description of it, the enumeration of its characteristics, a discussion of its relationship to other concepts (23). Other suggestions are that children study words in context (28), the meanings of roots (1), prefixes (29), suffixes (33), stems, and the parts of a compound (15).

*Application.* Children should be urged to use a concept as a word and as knowledge which can be applied. We often permit children to use words loosely, vaguely, and even inaccurately (14), when we might be offering more exact words for the situations (a funny day, a funny accident, a funny look, a funny feeling, act funny). Since mastery and retention of new learnings are based upon frequent and proper use, we may deliberately set up situations calling for thinking about the new concept, using it in speech, listening to it, reading it, and writing it.

These are only samplings of the ideas research offers the teacher in this very important work. They may provoke us into further reading of such studies as well as inspire us to creative application of the practices they support.

## References

1. Barry, Robert F., and Smith, Paul E. "An Experiment in Ninth-Grade Reading Improvement," *Journal of Educational Psychology*, XLV (Nov., 1954), 407-414.
2. Bernstein, Margery R. "Relationship Between Interest and Reading Comprehension," *Journal of Educational Research*, XLIX (Dec., 1955), 283-288.
3. Bloomer, Richard H. "Level of Abstraction as a Function of Modifier Load," *Journal of Educational Research*, LII (Mar., 1959), 269-272.
4. Bradley, Martha, Cahill, Loretta A., Tate, Harry L. "Acquisition of a Reading Vocabulary," *Elementary English Review*, XVIII (Jan., 1941), 19-21, 32.
5. Chall, Jeanne S. *Readability: An Appraisal of Research and Application*. Bureau of Educational Research Monograph No. 34. Columbus, Ohio: Ohio State University, 1958. Pp. 202.
6. Clyse, Juanita. "What Do Basic Readers Teach About Jobs?" *Elementary School Journal*, LIX (May, 1959), 456-460.
7. Dale, Edgar, and Reichert, Donald. *Bibliography of Vocabulary Studies*, Revised Ed. Columbus, Ohio: Ohio State University, Bureau of Educational Research, 1957. Pp. 174.
8. Davis, Irene Poole. "The Speech Aspects of Reading Readiness," *National Elementary School Principal*, 17th Yearbook, 1938. Pages 282-289.
9. Dolch, Edward, and Leeds, Donald. "Vocabulary Tests and Depth of Meaning," *Journal of Educational Research*, XLVII (Nov., 1953), 181-189.
10. Durkin, Dolores. "Children's Concept of Justice: A Further Comparison With the Piaget Data," *Journal of Educational Research*, (March, 1959), 252-257.
11. Fennema, Elizabeth H. "Mental Imagery and the Reading Process," *Elementary School Journal*, LIX (Feb., 1959), 286-289.
12. Gammon, Agnes L. "Comprehension of Words With Multiple Meanings," *California Journal of Educational Research*, III (Nov., 1952), 228-232.
13. Gray, William S., and Holmes, Eleanor. *The Development of Meaning Vocabulary in Reading: An Experimental Study*. Publication No. 6 of the laboratory schools of the University of Chicago. Chicago: Department of Education, University of Chicago, 1938. Pp. 140.
14. Gunderson, Agnes G. "What Seven-Year-Olds Like in Books," *Journal of*

- Educational Research*, L (March, 1957), 509-520.
15. Hunt, Jacob Tate. "The Relation Among Vocabulary, Structural Analysis and Reading," *Journal of Educational Psychology*, XLIV (April, 1953), 193-202.
  16. Jarolimek, John, and Foster, Clifford D. "Quantitative Concepts in Fifth-Grade Social-Studies Textbooks," *Elementary School Journal*, LIX (May, 1959), 437-442.
  17. Kruglov, Lorraine P. "Qualitative Differences in the Vocabulary Choices of Children as Revealed in a Multiple-Choice Test," *Journal of Educational Psychology*, XLIV (April, 1953), 229-242.
  18. Lange, Philip C. "Study of Concepts Developed by Students in an Undergraduate Course in the Psychology and Practice of Teaching," *Journal of Educational Research*, (May, 1943), 641-661.
  19. McCullough, C. M. "Learning to Use Context Clues," *Elementary English Review* XX (April, 1943), 140-143.
  20. Otterman, Lois M. "The Value of Teaching Prefixes and Root-Words," *Journal of Educational Research*, XLVIII (April, 1955) 611-616.
  21. Reid, Florence. "Films Provide a Rich Source of Vocabulary Study," *Journal of Educational Research*, LI (April, 1958), 617-23.
  22. Russell, David H. *Children's Thinking*. Boston: Ginn and Co., 1956. Pp. 449.
  23. Russell, David H. *The Dimensions of Children's Meaning Vocabularies in Grades Four through Twelve*. Publications in Education, Vol. 11, No. 5. Berkeley: University of California Press, 1954. Pages 315-414.
  24. Sachs, H. J. "The Reading Method of Acquiring Vocabulary," *Journal of Educational Research*, XXXVI (Feb., 1943), 457-464.
  25. Serra, M. C. "A Study of Fourth Grade Children's Comprehension of Certain Verbal Abstractions," *Journal of Experimental Education*, XXII (Dec., 1953), 103-118.
  26. Serra, M. C. "Amplifying and Simplifying Instructional Materials: Effects on Comprehension," *Elementary School Journal*, LV (Oct., 1954), 77-81.
  27. Serra, M. C. "The Concept Burden of Instructional Materials," *Elementary School Journal*, LIII (May, 1953), 508-512.
  28. Serra, M. C. "How to Develop Concepts and Their Verbal Representations," *Elementary School Journal* LIII (Jan., 1953), 275-285.
  29. Stauffer, Russell G. "A Study of Prefixes in the Thorndike List to Establish a List of Prefixes That Should Be Taught in the Elementary School," *Journal of Educational Research*, XXXV (Feb., 1942), 453-458.
  30. Stolurow, Lawrence, and Newman, J. Robert. "A Factorial Analysis of Objective Features of Printed Language Presumably Related to Reading Difficulty," *Journal of Educational Research*, LII (March, 1959), 243-251.
  31. Sutton, Rachel S. "The Effect of Vocabulary Building on Reading Skills," *Elementary School Journal*, LIV (Oct., 1953), 94-97.
  32. Templin, Mildred. *Certain Language Skills in Children*. Minneapolis: University of Minnesota Press, 1957. Pp. 183.
  33. Thorndike, Edward L. *The Teaching of English Suffixes*. Teachers College Contributions to Education, No. 847. New York: Teachers College, Columbia University, 1941.
  34. Traxler, Arthur E. "What Does Research Suggest About Ways to Improve Reading Instruction?" In Arno Jewett, Ed. *Improving Reading in The Junior High School*, pages 5-15. Bulletin No. 10, U.S. Department of Health, Education, and Welfare. Washington: U.S. Government Printing Office, 1957. Pp. 165.
  35. Vineyard, Edwin E., and Massey, Harold W. "The Interrelationship of Certain Linguistic Skills and Their Relationship With Scholastic Achievement When Intelligence Is Ruled Constant," *Journal of Educational Psychology*, XLVIII (May, 1957), 279-286.
  36. *Webster's New Collegiate Dictionary*. Springfield, Mass.: G. and C. Merriam Co., 1953.
  37. Werner, Heinz. "Change of Meaning: A Study of Semantic Processes Through the Experimental Method," *Journal of General Psychology*, L (April, 1954), 181-208.
  38. Witty, Paul A., and Fitzwater, James P. "An Experiment With Films, Film-Readers, and the Magnetic Sound Track Projector," *Elementary English*, XXX (April, 1953), 232-241.
  39. Yock, Douglas H., and Erlandson, Forrest L. "The Effectiveness of Visual Aids in Dental Teaching," *Journal of Educational Research*, LII (Sept., 1958), 11-15.

# The Process of Reading

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**W**HEN CHILDREN first enter school they have already learned to communicate through speech. The process of learning to read can best be understood by relating it to the nature of speech and to the experiences which children have had in learning to speak. Psychologically, the processes of speech and reading are quite similar, the difference being mainly in the sense avenue through which the verbal stimuli are received. When children enter school they have an oral vocabulary of several thousand words, they have learned to distinguish very small differences in word sounds, they have learned that the ideas expressed in speech depend on the serial order in which the words are spoken, and they have attained a degree of skill in listening that enables them to understand speech at the usual rate of adult conversation. The essential difference between knowing how to read and how to understand oral speech is the substitution of visual perception of printed verbal symbols for the auditory impression of the same symbols when spoken. The thoughts expressed are the same, the vocabulary is the same, and the word order is the same. The new problem in reading is to learn to recognize the visual symbols with accuracy and reasonable speed.

## Word Recognition

The unit in reading material is the same as the unit in speech, namely, the word. The first problem in learning to read is to recognize these printed symbols and to relate them to the corresponding speech symbols. The early American schools failed to see this essential relationship and instead introduced reading by teaching first the letters of the alphabet, then syllables, regardless of whether or not they were meaningful, and finally whole words and phrases. However, studies using a tachistoscope have shown that familiar words can be recognized about as quickly as individual letters or syllables, and that short phrases of familiar words can be recognized almost as readily as single words.

The effect of the extensive research of this type has been to emphasize that reading deals with word patterns rather than with individual letters or syllables. To be sure, in the initial learning of new words attention may need to be given to the sequence of certain letters and syllables, but when the child has learned thoroughly to recognize a word, the relationship of length of word and difficulty disappears. Learning a word is not a matter of getting the meaning from the sum of the letters or syllables, but rather from learning

to recognize it as a whole much as one learns to recognize a person. The appearance of words should be learned so thoroughly that, during the process of reading, only a minimum of attention needs to be given to these details. One should, however, distinguish between this process of recognizing words as wholes while reading from the process of first learning words before they are used in reading. Research on this latter point will be noted in the section which deals with phonetics.

Tachistoscopic research has shown that it is easily possible to recognize a familiar word in one hundredth of a second. But it does not follow that a person can recognize one hundred words in one second. Reading is not a process of rapid recognition of one word after another. Rather, it is a process of fusing the meaning of single words into a sequence of meaning. The total act of reading is, therefore, a combination of the visual recognition of words and the central thought processes that are stimulated by them. This complex is sometimes separated into the mechanics of reading and comprehension. This may be a convenient way to analyze the total reading process provided one understands clearly that both are necessary for the complete act of reading. Several studies of oral reading in the first grade have shown that pupils sometimes carry on a process of word-calling without any apparent comprehension of the fused thought content.

### Functional Reading

In contrast with the tachistoscopic techniques which have dealt chiefly with the static recognition of words and phrases, the technique of eye-movement photography has been employed in studying the functional processes that are carried on during actual reading. There are now well over a hundred substantial studies of eye-movements in reading and they provide a valuable body of objective data for understanding the process of reading. Four particular contributions of this kind of research will be noted.

*Span of recognition.* Several studies have covered the school grades from the first through high school. They show a steady increase in the number of words perceived during a single pause of the eye. In grade one there are generally more pauses, or fixations, of the eye than there are words. This reflects the perceptual behavior of a child in trying to recognize words. As the child learns to read, the span of recognition increases up to the high school level, although the rate of increase is less after the middle grades. However, even for adult readers, the average span of recognition is usually not more than two words per fixation. It used to be common to print beginning readers in so-called "eye-fulls," phrases of two, three, or four words per line. Actually, no primary children have eye spans of that width.

*Speed of recognition.* As words become more familiar, the duration of eye pauses in reading becomes



shorter. Here, as in span of recognition, the research shows a steady increase in speed of recognition from grade to grade. When new or difficult words are encountered, the number of eye pauses and the duration of eye pauses both show an increase. The average duration of a pause of the eye for an adult reader is about one-fourth of a second, whereas in the first grade it is more than twice this long.

*Irregular eye-movements.* The beginning reader's eyes make many back and forth movements in reading a line of print, whereas a mature reader's eyes move forward very regularly as they cover the lines. For the highly competent reader the eye-movement pattern shows great regularity from line to line.

These three characteristics, (a) span of recognition, (b) duration of fixations, and (c) regressive eye movements provide objective evidence of difficulties in the reading process and are also excellent measures of level of maturity in the perceptual aspects of reading. They show the devastating effect of unfamiliar words on the smoothness of the reading process. They show the effects of difficulty in content on the perceptual habits of the reader. They show the very heavy load of eye-muscle work for the first grader, which is one of the main reasons for his fatigue in reading. If a teacher is familiar with the eye-movement studies, she can understand much better the nature of the difficulties that are encountered in learning to read.

*The eye-voice span.* Another of the useful findings of the eye-movement studies is the relation of the eye and the voice in oral reading. The beginner looks at each word as he pronounces it and then moves on to the next. This produces a mechanical, word-calling type of reading. The mature reader lets his eye travel a considerable distance along the line of print before he begins to read orally. This lag of the voice behind the eye gives him an opportunity to grasp the meaning and to organize his vocal expression in terms of the content of what is read. This looking ahead provides the flexibility that characterizes effective oral reading.

Eye-movement habits are directly influenced by the degree of difficulty of what is read. While it is obviously necessary to push ahead into more difficult material year by year, it would also seem to be desirable to develop increased speed and smoothness of perceptual habits by providing much practice in reading material that is at a level of difficulty a year below the present grade location of the pupil.

### Phonetics

Teaching reading by analyzing words into their sound, or phonetic, elements has been a controversial matter for many years. The research literature at present is not adequate for a final solution of the problem. Much of the data from research relates to the value of phonetics for pronunciation and spelling, and is of little value for understanding the reading process. Curiously, there is



far more discussion than research being carried on at present.

The case for phonetics rests basically on two sets of facts. The first of these has to do with the nature of language. The number of distinct vocal sounds that man can utter is small, probably about fifty. The English alphabet has twenty-six letters. With this small number of sounds and letters, English words to the number of more than 300,000 can be spoken and written. To learn to recognize each of these words as an independent verbal symbol is too great a task for the school to attempt. But if systematized by learning the phonetic elements of which words are made, a small amount of teaching would cover the *pronouncing* of a large number of words.

As a matter of fact, it is not this simple. The English alphabet is not a phonetic one and there are many non-phonetic elements in English words. Although the pronunciation of many words can be covered by a small amount of phonetic instruction, there are many irregular words for which such instruction only results in confusion. To provide the necessary instruction for learning to read by the sole and consistent use of the phonetic method would spread the method over the entire elementary school period and would necessitate impossible restrictions in the use of words prior to the time their phonetic elements could be taught. Furthermore, at best the phonetic method teaches only the *pronunciation* and not the *meaning* of the words.

The second set of facts on which phonetic instruction rests is that, on entering school, children know both the sounds and the meanings of several thousand words, but do not know their visual appearance in print. Since they already know the meanings of these words, it is pointed out that a limited use of the phonetic method would be highly advantageous in helping them recognize the printed symbols by "sounding" the phonetic elements of the words. This method works well with such words as "telephone" since a child already knows what a telephone is and he recognizes the visual symbol when he hears himself say it. But if the word were "phlobaphene" the sounding of its elements would be of no help in reading because he would still be ignorant of its meaning.

From the evidence at hand it would be difficult to support either a program of all phonetics or of no phonetics. A combination (which is now the rule in many schools) seems to have more support than either extreme. There is some evidence from research to support this view. First, while the unabridged dictionary does contain more than 300,000 words, no one uses all of them. Of the common non-technical material read by adults, more than 98 per cent of the words are found in a basic vocabulary of 4,000 words. Furthermore, it has been shown that 75 per cent of such reading matter makes use of no more than 300 different words. If the schools that use the word-recognition (non-phonetic) method were to teach words selected

at random from the unabridged dictionary the task would indeed be hopeless. But if they use the data from vocabulary research and teach the commonest words first, the task is by no means impossible. By using a combination of common sight words plus some phonetic analysis for other words whose meanings are already known through use in speech, the school may develop a very workable method. However, the case for phonetics should not be dismissed, and better research on the problem is certainly warranted.

### Oral Reading

In the early American schools reading and spelling were taught together. In fact, the most widely used textbook in reading in the 1800's was Noah Webster's *Blue Backed Speller*, which is also the best example of a one-hundred-per-cent phonetic reader. Also, in the early American schools, oral language and reading were tied together for purposes of instruction. The oral reading method was quite universally used throughout the entire elementary school period until the second decade of the twentieth century. At that time Judd called attention to differences in oral and silent reading as revealed through eye-movement research. He noted that in oral reading the span of recognition was narrower and the duration of fixations longer than in silent reading. Other evidence showed a superior rate for silent reading. One of the clearest examples of the influence of research on a school subject is found in the

shift of major emphasis from oral to silent reading in the 1920's and 1930's. In some cases, as in the McDade method of non-oral reading, there was an extreme one-hundred-per-cent shift to silent reading. The recent popular demand, mainly outside the schools, for a return to the phonetic method would reverse the shift by an equal amount in the direction of an oral method.

The research evidence indicates that children will learn to read regardless of the degree of emphasis on oral or silent reading methods. The question of emphasis resolves itself into a sensible appraisal of the values inherent in each. The strongest case for oral reading as the basic method of instruction comes from the eminent linguist, Leonard Bloomfield, who holds that reading should be keyed to the oral language already mastered at a functional level when children enter school. He would use oral language through the medium of phonetic instruction as the sole method for learning to read. The opposing position which leans to major emphasis on silent reading is defended on the basis of psychological rather than linguistic evidence. This position is that reading is essentially a process of communication from the printed page to the child, resulting in the transfer of information and ideas to the mind of the child. Oral reading, they hold, is simply a modification of the basic act of reading by which meanings received may, quite properly, be expressed to others when the occasion demands but that it is better to stress

from the beginning the idea that reading is, at heart, a thought-getting process.

Some of the conflict between oral and silent reading methods might be resolved by separating instruction in oral language from reading, as at an earlier time spelling was placed in a separate program. No one denies the importance of training in oral language. The phonetic method would quite properly be applied to learning pronunciation of words. Oral expression, including much of the oral reading, could be taught with audience situations that are genuine. The most important objection to mixing oral and silent reading is the carry-over of subvocalization or inner speech into the silent reading process. When this is done the rate of silent reading is held down by the muscular limits of inner articulation, and the resulting product is a slow reader.

### **Rate of Reading**

The fact that an increasing number of young people continue their education beyond high school is focusing new attention on rate of reading. In spite of the wide interest in reading during the last thirty years there is little evidence of increase in the usual rate of reading. Yet, the demands of college programs put an ever greater strain on the slow reader. The usual rate of reading non-technical material at the end of the elementary school is about 250 words per minute, while for college students the average rate is about 300 words. The smallness of the increase beyond

the rate of the elementary school is a cause of much concern, particularly in view of the selective character of the college population.

There has been a great deal of research on methods of increasing rate of reading. One method has been to use flash cards or tachistoscopes to induce quicker perception of printed words. By and large, the results have been disappointing. In an attempt to deal with rate of reading in a more functional situation, various methods have been devised to stimulate and control rate. Of the different methods used to present successive parts of a line at controlled rates, the Harvard reading films are perhaps the best known. More recently, attention has shifted to methods of exposing, or covering, successive lines on a printed page by mechanical devices which make possible the exposure of material to be read at whatever rate is desired. The results from these methods have indicated that rate, without loss of comprehension, can be increased far beyond the rates usually obtained in school classes. Evidence from eye-movement records taken at the end of such training shows that the principal change has been in span of recognition rather than in duration of fixations. A gain of 50 per cent in span of recognition is usually accompanied by gains of no more than 10 per cent in speed of recognition. There have been extreme claims for gains in rate of reading that go quite beyond the credulity of serious researchers, but there is well substantiated evidence from research on

rate of reading that leaves little room for doubt that a sizable increase in rate without loss in comprehension could be achieved if schools were to attempt it seriously. There is no support in research for the popular notion that the slow reader is superior in comprehension.

An increase in rate by even 25 per cent by the end of high school would be of incalculable value to those who go on to college and would make possible increased breadth of information and ideas for those who leave school. More serious research on rate is needed, but studies now available indicate that, at the college level, rate of reading may be forced from 100 to 300 words per minute above the reader's present rate without a break in level of tested comprehension.

### Research in Reading

In the writer's view, the teaching of reading is basically a problem of visual perception. The first goal is to enable the child to derive meaning from printed verbal symbols at the same level of functional efficiency that he has already attained in getting meanings from spoken words. The child has learned to interpret speech at a functional level before entering school. The first obligation of the reading class is to produce this same efficiency with respect to the visual perception of print. There is no substitute for this ability; this is a first obligation. The process of learning to read is the process of doing just this.

Other aspects of reading are less

important until basic reading ability is achieved. The school has often so cluttered its program of reading with secondary objectives, some of them of admitted value, that the primary objective of teaching reading is not achieved. The writer has had in his college classes students of unquestioned intelligence who were slow, clumsy readers because their basic reading ability was permitted to level off too soon. On tests of basic reading they scored below sixth grade norms.

Learning to read a foreign language is a parallel case of perceptual learning. If I want to learn to read the Russian language, my first task is to learn the words when they are printed in Russian and to associate them with their meanings. My goal is to learn these words in their various forms so well that I can read them at the same rate as I read my vernacular. I do not need to be taught how to think, or how to solve problems, or how to spell, or how to improve my personality by reading Russian, or what the great classics of Russian literature are. These may be good, but they do not teach me to read Russian. I already know how to read, but not in the Russian language.

The reading process is basically this kind of perceptual learning. The school needs to know how to accomplish it more effectively. The present intellectual climate is more favorable to basic research on methods of teaching reading than has been the case for three decades. Reading would be served by some singleness of purpose.



## Reading Interest: A Function of the Law of Effect

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ONE REASON, among several, for the widespread conviction that teacher training courses are easy and lacking in worthwhile content is the disarming notion that much of the psychology of teaching is just "common sense." When a student in an educational psychology course, for example, hears the instructor's explanations of the law of effect—the principle of rewards and punishments—he may think that he has nearly always understood this principle and may feel so confident of his understanding that he allows his attention to drift. Later, an examination may reveal that the student apparently did not understand the law of effect thoroughly, either before or after the classroom explanation.

While many of the principles of learning and teaching seem fairly obvious when presented by a good methodologist, they are not sufficiently obvious that most people could formulate them, even in everyday language, without some instruction. And these common-sense learning principles which are allegedly so apparent are often poorly applied by practicing teachers.

If a student in a college classroom overestimates his awareness of the principles of learning, it may not be very important at that moment. On the other hand, it appears that many American children and adults have

*learned* their lack of interest in reading, at least partly because of faulty application of the common-sense laws of learning in schools.

It is, of course, possible that lack of interest in reading is not a problem of sufficient magnitude to provoke an examination of its causes. There are abundant statistics which show that increasing numbers of books and magazines are published and sold in this country, that more than 90 per cent of adults read a daily newspaper, and that library services are being extended in various ways. Whenever educators wish to silence a Rudolf Flesch, they point to the mounting sales of children's books and to the superior performances on reading achievement tests by pupils of the present generation. All these items indicate that Americans have both the ability and the materials to read if they wish. However, they must have the inclination to read, and the research into the reading actually performed by Americans suggests that this inclination is often lacking.

Presumably, young adults provide the best indices of school success in developing a life-long reading interest, because young adults are no longer directly guided by the school in their reading habits, yet the attitudes toward reading which they developed in school should still in-

fluence them. Berelson (1) reported a survey which revealed that during a given month a group of high school students averaged about three times as much use of the library as a matched group just out of the secondary school (and not in college). Fifty-six per cent of the adults in this same survey sample indicated that they had been more active library users when they were in school. Berelson further reported that among a group of young women who had recently graduated from high school and who also indicated that they were not current library users, 90 per cent had possessed library cards when they were in school but had allowed their cards to lapse.

Of course, library usage is not a perfect indicator of reading interest, because reading materials can be acquired from many other sources, and because some would-be users do not have access to a library. Further examination of the research removes the relief which may be offered by either of these explanations, however, as Campbell and Metzner (2) discovered that more than half the adults in the nation live within one mile of a public library, yet less than a fifth of them had visited a library during the year preceding the survey. While reading materials can be acquired from other sources, the evidence indicates that much of the adult population is not inclined to read books or the higher level magazines. Link and Hopf (4) found that the nonreading half of our population reads only 6 per cent of all books consumed. As for the reading

of the serious magazines, last year *Harper's* reported the results of a survey of its readers which demonstrated that they are a highly select group (3).

Scarcely anyone who had examined research of the type cited would argue with the observation that a large proportion of Americans do not read very much printed material of quality. Because reading interest is not a convenient experimental variable such as chronological age, it is rather difficult to determine the extent to which interest or the lack of it influences the differing reading patterns of active readers and non-readers. However, when adults in the Campbell-Metzner sample were asked why their use of the library had declined since their younger years, 65 per cent responded to: "Read less; less interested in reading." It seems safe to conclude that a majority of students do not possess a lasting reading interest when they leave the schools. Many have unwittingly been taught to avoid reading because they have encountered a succession of teachers who adhered to certain out-dated practices and ignored the implications of the common-sense laws of learning.

Consider the law of effect. It might be paraphrased to state that when students are rewarded through their reading, they will tend to read more in the future; contrariwise, if they are unrewarded or punished by reading, they will be less likely to turn to reading in the future. Presumably, any time a student receives satisfaction from reading, his atti-

tude toward reading matter in general, and toward the teacher who led him to the particular satisfying reading matter becomes more favorable by some amount, however small. The primary reward in reading comes from the information or entertainment (or both) which satisfies the reader's motives for reading. A secondary type of reward which may be associated with reading comes from teacher, pupil, or parent approval or praise springing from outward evidence of the reading.

If a student is to achieve a life-long interest in reading as a result of the rewards received in school, the preponderance of these rewards should be of the direct sort, since the less direct rewards are not so likely to be earned, once the reader has left the schools. Thus, the twelfth-grade reading program should strive to provide students with direct satisfactions from reading, and should not depend upon social rewards, such as giving certificates for the reading of a specified number of books.

If teachers can strengthen reading interests by leading pupils into articles and stories which are intrinsically rewarding, they can also minimize or destroy interest in reading by teaching procedures which either reduce the magnitude of the reward or actually constitute a type of punishment. Assume that a pupil has read a book which was highly satisfying to him: his interest in reading this particular type of material is at a peak. But his teacher requires students to prepare extensive formal book reports of each book they read.

After a young reader has completed two or three such reports the prospect of future book reports is so distasteful that he is reluctant to read any books that are not required. The formal book review in this case has become a punishment strong enough to offset the anticipated rewards of further reading.

Through the use of less formal, more imaginative methods for book reporting, the teacher could have extended the rewards—and interests—instead of stifling them. For example, if two pupils had read the same story or book, they might be invited to prepare a simple dramatization of a particularly exciting or amusing portion of the story for their classmates—perhaps a mock radiocast or crude puppet show. With this more creative means of reporting on books the readers receive first the intrinsic reward yielded by the story and then the secondary rewards of classmate approval and even self-expression.

Another sort of punishment which can be inflicted upon young readers is the routinized study of the lives of authors. The pleasures of many a story have been wiped out by a teacher's insistence that students examine the life of the author according to a standard procedure which does not vary from one author to the next. Students' retention of information about an author's early life and his other not-very-important works is rather poor, although their failure to remember is not as disturbing as the damage to their general reading interest.

Instead of hampering reading in-

terests through uniform study of the biographies of almost all authors whose works are to be read, teachers can reinforce reading interest by more extensive, but flexible, consideration of just a few authors whose lives were either particularly interesting or conspicuously reflected in their literary efforts. In its seventh-grade basal reader Ginn exploits this strategy with interesting treatments of episodes in the lives of Mark Twain and Armstrong Sperry.

Still another punishment which can offset the rewards of an interesting bit of prose or poetry is over-analysis of the meaning of small segments of the writing. Sometimes teachers, anxious to be certain that the students understand a literary selection, spend considerable time on the microscopic probing of a single phrase or word. "Why did the author use this particular word?" or "What did the writer mean by this phrase?" Quite often the teacher can only speculate wildly as to the reasons for an author's choice of words; indeed, sometimes the author himself could not answer the question directed to the student readers. Admittedly, there are occasions which call for analysis of prose or poetry selections in order to clarify subtle meanings, but even the better-than-average student sometimes appreciates a story best as a whole and may find it less appealing and meaningful under analysis.

Most of the punishments mentioned in preceding paragraphs are somewhat specific to instruction in reading and literature. The depend-

ence on a single textbook for reading material in all content fields represents another application of the principle of rewards and punishments as it relates to interests in reading. When a teacher relies upon a basic textbook to provide all or almost all the reading content for a given course, no allowance is being made for the varying reading abilities represented in the class (unless the school classrooms are organized homogeneously by reading ability). If the textbook is two or three levels too difficult for the poorer readers, it is quite apparent that the assignment constitutes a punishment for them, as far as reading interest is concerned. The declining reading interest of the poor reader is a near-perfect illustration of the law of effect.

The single textbook assignment if not embellished with supplementary reading materials can also affect adversely the interest of the excellent reader. If a teacher of eighth-grade science assigns a text chapter on electricity and magnetism, the top-flight readers in the class will, of course, read it in just a few minutes. A thoroughly unenlightened teacher might then "punish" these good readers for their efficiency by suggesting that they read the assignment again, although certainly few teachers would make this error. More commonly, the good readers just remain unchallenged as they proceed to some sort of busywork. For some of them, there was not even any appreciable reward in the content of the assigned chapter, because they were good students and already



knew more about electricity than the chapter divulged. If these outstanding eighth-grade readers are to receive rewards from their science reading, they must be provided with content that answers the questions that matter to them, questions that go beyond the conceptual level of the eighth-grade textbook.

Reliance on a single textbook deprives young readers of rewards since the single text provides no opportunity for critical reading. If the textbook constitutes an undisputed source, students have no chance to observe that authors differ in their emphases, differ on minor points of detail, and occasionally differ on major philosophical views. The element of controversy which weaves in and out of the lessons on critical reading is quite invigorating to many juvenile readers. Sometimes a critical reading exercise takes on the flavor of a game, and thus interest is rewarded in much the same way that it is in games and contests.

Compared to the single textbook assignment, then, the differentiated reading assignment in content subjects would appear to help the young reader learn increased interest in reading in these ways:

1. The differentiated reading assignment provides more opportunities for the student to be rewarded by the intrinsic values of the reading material.

2. Unusually good or poor readers are rewarded instead of punished, since they read materials which have value for them.

3. The poor reader gleans more

from his reading, is able to make a greater contribution to class discussions, and is thus rewarded both by his own sense of achievement and by his classmates' approval.

4. Elements of controversy in critical reading lessons excite students and provide rewards in a number of ways, including some that are not clearly defined.

The logic which requires differentiation of content field reading assignments also underlies the need for materials of various levels for recreational reading. If anything, a range of difficulties is even more important among the recreational materials, because there is less teacher help available and the pupils are motivated to read mostly by their own interests, not by teacher-made study guides.

Four or five years ago the principal of a small high school in Oklahoma realized that the great bulk of his students were below-grade-level readers. As part of his plan to upgrade reading ability throughout the high school he placed in the library a number of easy books, including the American Adventure Series. In this school of ninety students, the (then) fourteen titles of this series were checked out thirty-nine times in a single week, and by the end of the semester they were worn to the point that they had to be replaced. Some teachers, knowing that the books in the American Adventure Series are designated for grade levels from second through sixth, might be horrified to find them in a high school library. It may very well be

that the reading ability of some of the pupils in this Oklahoma backwoods community could properly be described as horrifying, but the principal acted wisely when he provided easy, interesting material for the library. With easier materials many students enjoyed for the first time the rewards of reading for pleasure, and while they continued to read easy material for a time, the general level of reading ability and taste steadily improved in that high school.

Certainly one of the best ways in which a teacher can reward and strengthen a pupil's interest in reading is through personal effort to locate materials which will be likely to appeal to the pupil, and to place them in his hands with the suggestion that he will find the contents to his liking. The difficult element in this procedure is the requirement that the teacher know considerable about the interests, habits, and hobbies of each pupil. Once this information is acquired, the teacher can be on the lookout for books and articles of interest to specific readers. The search does not necessarily require a great deal of time; in fact, it may work better if the teacher tries only to keep each pupil's interests semi-consciously in mind, so that when suitable materials are encountered they will be recognized.

When a teacher takes the trouble to present to a pupil material that

obviously reflects some concern for his interests, the situation can be very rewarding. In addition to the yield from the reading itself, his ego benefits from the personal attention. There is probably no better way to reward and increase interest in reading.

There are assorted additional reasons for the lack of reading interest among so many American children and adults. Some of these reasons hinge upon rudimentary principles of learning, others upon principles which are not clearly understood at present. The obstructions to reading interest which have been considered in this discussion exemplify the fundamental law of rewards and punishments, a principle which teachers and prospective teachers consider to be rather obvious. These few reminders of the negative results achieved when the law of effect is ignored in the development of reading interest may alert some teachers to employ methods which maximize the rewards and minimize the punishments accompanying reading.

### References

1. Berelson, Bernard. *The Library's Public*. New York: Columbia University Press, 1949.
2. Campbell, Angus, and Metzner, Charles A. *Public Use of the Library*. Ann Arbor: Edwards Bros., Inc., 1950.
3. Fischer, John. "The Editor's Easy Chair," *Harper's*, 217 (Sept., 1958), 14-20.
4. Link, Henry C., and Hopf, Harry Arthur. *People and Books*. New York: Book Manufacturers Institute, 1946.

## The Improvement of Reading Rate And Comprehension in Adults

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INTEREST IN improving rate of reading is by no means a new trend. For example, in 1921 John A. O'Brien described the efficiency of a reading improvement program for pupils in grades three to eight (6). Within a short training period he succeeded in eliciting a 56 per cent gain in speed of reading and a small gain, too, in comprehension.

From 1925-1930 several noteworthy attempts were made to improve rate and comprehension in college classes. In one of the writer's courses in educational psychology at the University of Kansas the students (many of whom were teachers) considered the possibility of improving their own rate and comprehension in reading. By simple procedures they observed the characteristics of eye movements in reading. Then the relationship of eye movement to efficient reading of various kinds of materials was discussed.

Early in the semester all students started a reading improvement program. They were given help in understanding the new vocabulary and the unfamiliar concepts found in instructional materials. It was suggested that they read their own assignments in terms of various purposes such as: to answer questions, to note details, and to follow directions. The students arranged to spend three thirty-minute periods

each week in reading instructional materials. After every practice period each student made a summary or an outline of the materials read; he was encouraged to do extensive reading and to attempt at all times to improve his understanding as well as his rates of reading. Additional practice periods were set aside for reading other materials.

The results of standard and informal tests, given at the beginning and at the end of the semester, were compared. Most of the students made marked gains. The average increase in rate was about 50 per cent during the single semester; comprehension, too, was favorably affected. Although these gains were considered important, it was felt that the improvement probably applied chiefly to the reading of materials in the field of educational psychology. It was suggested, therefore, that the students attempt to make corresponding gains in other fields. This work was continued during the second semester. The students who participated gave unmistakable evidence of real improvement in reading proficiency and in their attitudes toward reading. This endeavor relied primarily on the use of books, although cards with new words upon them were shown in some classes. Discussion of the meanings of these words followed.

### Development of Devices for Controlling Rate of Reading

Since knowledge concerning the possibility of making improvement in speed of reading has been widely disseminated, business concerns have made available devices for studying and controlling eye movement. In efforts to control eye movement, simple flash cards have been replaced by other tachistoscopic devices of varying degrees of complexity. One of the early inventions of this type was the metronoscope—a complex triple-shuttered device—which exposed successively three segments of a line of large print. Rather optimistic claims were set forth for this device when it first appeared; however, conclusive evidence for the efficacy of a mechanical approach to reading improvement, *per se*, has not been forthcoming (11).

Interest in the conditioning of eye movements has resulted in the making of other types of tachistoscopic and "pacing" devices, such as the Reading Accelerator, the Flashmeter, and the Harvard Reading Films. The Reading Accelerator is a device by which the rate of reading is controlled by a shutter lowered mechanically to cover successive lines of print. A somewhat similar device, the Reading Rate Controller, was developed earlier. The Flashmeter is another such instrument, by which digits, words, phrases, and short sentences may be projected upon a screen for a determined period of exposure. Films, too, have been designed to encourage the student to

increase his speed of reading. In using these devices, the speed of exposure of different kinds of material may be controlled and advanced as progress warrants.

The use of such instruments has become a feature of "accelerated reading programs." Accelerated programs have proved unusually successful with adult groups, as have other efforts to improve the efficiency of adults' reading (9). In *Business Week* (April 5, 1952) it is reported that a program of reading improvement, utilizing the facilities of the University of Pittsburgh, resulted in attracting groups of businessmen who made unusual progress (3). Similarly, the Foundation for Better Reading, in Chicago, has attracted various groups of businessmen to its courses. According to the article cited above, the Reading Laboratory in New York "has just finished a program for the Mutual Life Insurance Company." The president of Reading Laboratory is quoted as follows: "Some clients begin reading at from 150 to 200 words a minute. Others can do as well as 300 to 500. The average is about 250. With individual equipment each can work at his own pace toward the goal of 650-700 words per minute. Some of the pupils go way beyond that. A Chicago lawyer set a Foundation record of 3,750 words."

Such articles illustrate the demand at the present time among adult groups for programs in reading improvement. And the articles reflect another fact of significance. Most people probably adopt a way of read-



ing—at a congenial pace—that is far below the level of speed and comprehension at which they might read with pleasure and efficiency. The gains made show that this congenial pace can be greatly altered by practice. Undoubtedly, accelerated reading programs have brought gains in speed of reading as measured by the tests employed. But it is well to inquire whether such gains are really worthwhile, and whether one is justified in concluding that phenomenal gains in rate of reading carry with them a corresponding improvement in comprehension.

### **Limitations in Tests of Reading Speed and Comprehension**

Moderately high coefficients of correlation have frequently been reported between speed and comprehension. These coefficients are products of the types of materials read and the measuring procedures. Standard tests of reading speed are obviously limited to the particular kinds of materials covered. Such tests frequently include inadequate samples of the different kinds of materials individuals read or need to read (5). Moreover, the tests are sometimes too short to afford reliable measures of speed or of comprehension (1).

One of the most obvious limitations of reading comprehension tests is the fact that they are "timed," thus introducing the element of speed into the measurement of comprehension (2). Ralph C. Preston and Morton Botel (7) attempted to check the hypothesis that "when

reading comprehension is tested under 'untimed' conditions, rate and quality of reading are unrelated." They utilized 32 students in a class at the University of Pennsylvania. They report: "... The correlation of rate and timed comprehension yields the statistically significant coefficient of .48. The correlation between rate and untimed comprehension yields the coefficient of .20—not statistically significant. Since untimed comprehension is the 'purer' comprehension score, we conclude there was little relationship between rate and comprehension. It is clear that the usual procedure for measuring comprehension is untenable. It errs in its measurements of comprehension by designating as 'comprehension' what is in reality partly speed."

It seems, from studies such as Preston and Botel's, that faulty or inadequate testing devices and procedures have led to the invalid conclusion that reading rate and comprehension are closely associated. Several other studies support this conclusion. For example, J.H. Shores and K. L. Husbands (8) obtained data on the reading of pupils in grades four through six. They found that comprehension "depended less upon speed than upon intelligence, purposes of the reading, difficulty of the material read, opportunities for verifying questions of comprehension, and the continuity of the text."

### **The Use of Devices**

Despite the relatively low relationships cited above and the limitations

of teaching methods in some studies, we have found that many people can improve greatly their rate of reading as well as their understanding of various kinds of material. The writers have previously reported the results of a remedial reading program with college students which demonstrated the possibility of improving reading skills markedly (12). With the development of techniques and the introduction of new materials of instruction, even greater gains are now made by college students who participate in these programs.

An opportunity arose recently to study the gains made in a reading improvement program for a group of adults. At the Northwestern University Traffic Institute persons with official responsibilities in street and highway traffic work are enrolled for courses lasting from five days to nine months. The most comprehensive of the Institute courses is its academic-year Traffic Police Administration Training Program — for police officers of command and supervisory rank. An efficient selection system operates to locate those police officers whose records demonstrate high promise of profiting from the training.

The men are given scholastic aptitude tests and intelligence tests, and an initial screening test in reading. They are rated by their superiors and each of them is interviewed by a representative of the Traffic Institute. Most of these men (about thirty in number each year) have been out of school for many years.

To help them in their intensive study, which demands a great deal of reading, arrangements have been made with the Psycho-Educational Clinic at Northwestern University to retest the group and to offer those who need help a course in reading improvement. The course is offered early in the academic year, and it is necessarily short and intensive.

In the fall of 1953 the Iowa Silent Reading Test, Advanced, Form Am was administered. Twenty-four men whose test scores fell below the fiftieth percentile for college freshmen were selected for training. The average age of the group was about thirty-five, and their average length of service was over ten years. Generally high mental ability was indicated by a mean A.G.C.T. score of 115. The training was optional for those who scored higher.

### **Aims of the Program**

Although the men stated that their greatest need was the ability to read more rapidly, increase in speed of reading was not the only objective in this work; more rapid reading was emphasized to some extent, but the following skills were also stressed: (1) The ability to read long selections to discover the organization and the main points presented. (2) Proficiency in getting the central thought of paragraphs and in separating main ideas from less important details. (3) The development of a flexible approach to reading, with emphasis on the use of varied reading techniques for different purposes. (4) The ability to adjust read-

ing rate to purposes for reading and to the difficulty of the material. (5) The ability to read various kinds of materials with appropriate comprehension. (6) The development of general vocabulary and of specialized vocabularies in different subject areas. (7) Proficiency in reading and in using appropriate study skills in the various fields.

The program was offered with the understanding that modifications of these aims would be made as the instructors discovered other needs.

### Description of the Program

The twenty-four men were divided into two groups of twelve each. Each group met for a two-hour period each week for six weeks. Two instructors were present at each meeting to work with smaller subgroups and to provide individual instruction on special problems. Progress records were made by the men themselves, and the instructors kept additional accounts of many aspects of their progress. Three classrooms were provided for instruction in order that a variety of activities could be carried on in rotation. These activities included:

*Discussion of the text used for the program.* To encourage reading improvement outside of class and to give the men information about reading skills, assignments were made in the textbook, *How To Become a Better Reader* (10). Regular weekly assignments were discussed in group meetings.

*Drill on pacing machines.* Various materials were employed with six

Reading Accelerators\* to aid in the development of reading speed, to lead the men to abandon such incorrect habits as excessive regressions, and to learn to adjust rate of reading efficiently.

*Tachistoscopic Training.* A Flash-meter Tachistoscope† was also employed to break the habit of reading word-by-word and to demonstrate the possibility of rapid reading by phrases. Those who were initially able to recognize phrases exposed at 1/100 of a second were given only a few sessions of tachistoscopic training. It was felt, though, that this experience had great benefit in terms of motivation and self-confidence. Having proved to themselves that they could read words in 1/100 of a second as well as in a full second, that they could read phrases of three or four or five words as well as they could read single words, they were ready to attempt to transfer these skills to more meaningful materials.

*Drill on specific reading skills.* Exercises were selected from the following sources and were used to develop more efficient skills.

Wiling and Webster, *A College Developmental Reading Manual* (New York: Houghton Mifflin, 1943). (Exercises on paragraph reading.)

Elizabeth Simpson, *SRA Better Reading Books* (Chicago: Science Research Associates, 1951). (Used to provide a weekly record of speed

\*Manufactured by Science Research Associates, Chicago.

†Manufactured by Keystone View Company, Meadville, Pennsylvania.

and comprehension in graphic form in the accompanying Progress Folder.)

Ruth Strang, *Study Type of Reading Exercises, College Level* (New York: Teachers College, Columbia University, 1951). (Many of the chapters in this book were used to explain various reading skills.)

*Group discussion of study skills.* Exercises in skills including outlining, note-taking, organizing materials, studying for examinations, critical reading, reading specialized material in science and mathematics, etc., were based upon textbooks as well as upon the materials found in workbooks.

*Group work on vocabulary improvement.* Techniques for building vocabulary were introduced. These included study of word roots, suffixes, prefixes, and the development of specialized vocabularies in the particular subject fields. Practice in the use of context clues was also given.

The largest amount of time was devoted to learning to read whole passages accurately and thus to become able to use textbooks and technical presentations more effectively. Materials for very rapid reading and skimming were likewise introduced, with an effort made to help the men to know *when* to read in these ways.

Even though some of the men resented the program of record keeping as an additional requirement, most of the men were quite favorably disposed toward it, since they could follow their progress and appreciate their improvement and the

better "feel" they were developing for reading. Continuous evaluation by each man of his own progress was considered very important, since the men might easily have become discouraged without awareness of their gains.

### Outcomes of the Program

The principal method used to evaluate the gains in reading ability was that of re-test scores. Since Form Am of the Iowa Silent Reading Test (4) had been administered when the men were selected for this program, an alternate form (either Cm or Dm) was given at the end of the work. Form Bm was not used for terminal testing because it repeats some material of Form Am.

Table I presents the initial and terminal test scores for the group, obtained by computing an arithmetic mean of the standard scores and by determining the corresponding percentile from the published test norms for Grade 13. The smallest individual gain was from the 13th to the 17th percentile; the greatest gain was from the 16th to the 82nd percentile, a gain of 66 percentile points.

TABLE I  
AVERAGE INITIAL AND TERMINAL TEST SCORES  
IOWA SILENT READING TESTS

	Standard Score	Percentile Rank (13th Grade Norms)	Standard Deviation*
Initial	174.13=174	34	10.11
Terminal	188.71=189	70	8.87

\*In standard score points

The average increase of 15 standard-score points — corresponding to a gain of 36 percentile points—is



certainly very high, and is significant at the one per cent level of confidence. There is, however, no significant difference in the variabilities of the initial and terminal scores.

Average gains in the subtest areas of the Iowa Silent Reading Test are presented in Table II. The table also reflects the relative strengths and weaknesses of these men. The greatest gain was in reading rate, with a small gain in the "comprehension" subtest. The fact that these men were able to improve their scores in comprehension, despite the marked increase in reading speed, is gratifying and indicates that they have probably made general improvement. It must be kept in mind, too, that since all of these subtests are strictly timed, speed of reading operates to affect all the scores, and general improvement in the several areas probably reflects, in part, improvement of rate. There was no area of the test in which some gain was not made.

The greatest gain on the test, in reading speed, is noteworthy when it is observed that speed was not the primary goal of the program. Moreover, since the men acquired flexi-

bility in reading rate, they were able to read many types of materials much more rapidly after the training. In Poetry Comprehension (Number 3) a gain of 16 percentile points is noted, although poetry reading found little place in this short course; this increase, again, is most likely attributable to the fact that their better rate of working enabled them to attempt more of the items.

Other outcomes of the program were evident in the progress records kept both in the text book, *How To Become a Better Reader*, which has a built-in progress record, and in class. Although these records reflected considerable variation in performance, a general improvement was observed at the end of the program. It is interesting to note here that these gains did not appear as a smooth upward curve on the progress charts. At first, as old habits were being broken and new ones introduced, the progress records often showed a drop in both speed and comprehension. After this initial drop they grew generally higher until a level above that of the begin-

TABLE II  
INITIAL AND TERMINAL AVERAGE SUBTEST SCORES  
ON THE IOWA SILENT READING TEST

Subtest	Initial		Terminal		Gain in Percentile Points
	Standard Score	Percentile*	Standard Score	Percentile	
1. Rate	164	42	195	90	48
Comprehension	188	55	191	61	6
2. Directed Reading	169	32	186	55	23
3. Poetry Comprehension	168	32	177	48	16
4. Word Meaning	186	39	197	64	26
5. Sentence Meaning	188	46	197	63	17
6. Paragraph Comprehension	176	42	182	52	10
7. Use of Index	164	24	183	50	26
8. Selection of key words	171	30	186	70	40

\*All percentiles are derived from the 13th grade norms published with the test.

ning was reached; it was considered important to anticipate this decrease and to stress it as a "normal" occurrence in order to prevent discouragement.

### Implications of This Program for Adult Education

Following are some implications of this program for adult education generally.

1. It is desirable to use specific goals. It is desirable, too, that these goals be clear at all times and that the learners check their progress toward them.

2. Adult education programs must proceed from the level of skill possessed at the time each program is initiated. This starting point should be determined by objective testing methods and other evaluative devices before instruction starts. Many of the materials prepared for use in adult reading programs are too easy. The general reading level of the average adult may be quite low, but many of the people who enter reading improvement programs are already fairly good readers who wish to become superior readers. It is important to have practical materials for them, as well as for the adults of very meager ability.

3. Most adults can make great gains, since most adults adopt a congenial reading pace which can be accelerated. It is our belief that the value of programs of this type is not that they "teach" several years of reading in a few weeks or months, as some might infer from test norms, but rather that they enable the reader

to utilize his own undeveloped potentiality.

4. A functional approach is desirable. Nearly all adults have some real needs for reading better; these needs should be ascertained, and the program should provide varied materials to build the needed skills and give adequate practice in different situations.

### References

1. Carrillo, Lawrence W., and Sheldon, William D. "The Flexibility of Reading Rate." *Journal of Educational Psychology*, 43 (May, 1952), 300.
2. Davis Frederick B. "Comprehension in Reading." *Baltimore Bulletin of Education*, 28 (Jan., Feb., 1941), 16-24.
3. "Fast Reading Courses Take Executives Back To School." *Business Week*, (Apr. 5, 1952), pp. 78-80.
4. *Iowa Silent Reading Tests*. New York: World Book Company, 1943. (Advanced Forms.)
5. McKee, Paul. *The Teaching of Reading in the Elementary School*. Boston: Houghton Mifflin, 1948. P. 110.
6. O'Brien, John A. *Silent Reading*. New York: The Macmillan Company, 1941. Pp. 270-273.
7. Preston, Ralph C., and Botel, Morton. "Reading Comprehension Tested Under Timed and Untimed Conditions." *School and Society*, 74 (Aug. 4, 1951), 71.
8. Shores, J. Harlan, and Husbands, Kenneth L. "Are Fast Readers the Best Readers?" *Elementary English*, 27 (Jan., 1950), 52-57. Quotation from A. I. Gates. *Teaching Reading*. (Pamphlet.) Washington, D. C.: National Education Association, 1953. P. 31.
9. Speer, George S. "Using Mechanical Devices Can Increase Speed of Reading." *The Nation's School*, XLVIII (Oct., 1951), 45-48.
10. Witty, Paul. *How To Become A Better Reader*. Chicago: Science Research Associates, 1953.
11. Witty, Paul. "Problems in the Improvement and Measurement of Growth in Reading." *School and Society*, (Sept. 5, 1953), pp. 69-73.
12. Witty, Paul; Stolarz, T.; and Cooper, W. "Some Results of a Remedial Reading Program for College Students." *School and Society*, 76 (No. 1982, Dec. 13, 1952), 376-380.

## The Role of the Reading Consultant In the Public Schools

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THE FOLLOWING excerpts taken from some activity reports of a reading consultant on the job may provide clues to the need for the consultant's services and indicate some of his responsibilities.

"The principal of Davis School requested an appointment so that we might discuss and arrange specific help for three instructional problems: (1) The young man teaching eighth grade for the first time wanted some specific suggestions for procedures that he might use to improve the reading skills of three of his pupils to prepare them more adequately for high school reading. (2) The modification that should be made in the program of a second-grade youngster who is a sight-saving case. (3) A new first-grade teacher wanted help with four children who were not responding well to their present reading program."

"In Jefferson School two cases of extreme reading retardation are in the same sixth-grade class. Analysis indicated that these boys have only a limited sight vocabulary. The teacher was at a complete loss to know what to do with pupils at the pre-primer level. The first and most important task has been to convince her that she does have the ability to help the boys. She needs much advice, assurance, and support as well as specific recommendations for

procedures and for arranging her program so that she has time to work with the boys. I am working closely with her and I have supplied her with reading materials at the boys' learning level. She is providing some classroom instruction and has been encouraged by seeing some progress made. I am working with the boys daily but it will not be too long before she will be able to assume full responsibility for them. I will continue to make periodic checks on their progress, followed up with planning conferences with the teacher."

"The three cases that were reported at the Lincoln School are back in their classrooms full time. Diagnostic examinations were made and the report discussed with the principal and the teachers. The children are working at their instructional level and special materials have been provided for them in reading, in social studies, and in science."

"Arrangements have been completed for the Word Analysis Program Workshop that will be held on March 15. On March 1 a bulletin will go out that presents a complete overview of the program. This will give the teachers an opportunity to do some thinking and it may help them to formulate specific questions before our meeting."

"During the month, I have had four individual parent conferences, met with the West Street Mothers Study Club, and addressed the Jefferson PTA."

### **Needs of Children, Teachers, and Principals**

Evident in the excerpts from the activity report of the reading consultant are some very real needs of children, of teachers, of principals, and of parents. An analysis of *why* these needs exist will help to establish the potential value and contribution of the reading consultant, and at the same time assist in identifying his specific responsibilities.

A broad range is evident in the professional preparation and experience of teachers in all our schools today. On one faculty there will may be: (1) the continuing staff of experienced teachers who are too often in the minority, (2) beginning teachers who have full professional preparation, (3) beginning teachers who are liberal arts graduates and who have had some form of limited intensive professional preparation, (4) "returnees" to teaching after some years of absence and who have varied amounts of preparation and experience. The diverse newcomers must be oriented to the school program, and at the same time unified effort must be developed with the continuing staff. Maintaining a sound program of reading instruction becomes a perennial problem, for only too often half of this staff will not be present the next September. They will have moved to communi-

ties paying higher salaries both within and outside the state.

In one small town one group of fifth-grade children have never had the guidance of an experienced teacher. Each school year their beginning teacher undoubtedly learned far more than they did.

Principals vary in their professional backgrounds and personalities. Many are being appointed with but two or three years teaching experience at a single grade level. In some instances no experience is required. Because of sharp increase in pupil enrollment, a principal may find that his job responsibilities have doubled and even tripled; yet additional clerical help and additional professional resource personnel are not added to the staff. Professional leadership and assistance to teachers in solving instructional problems gives way of necessity to full-time attention to administrative duties.

Supervisors, consultants and/or directors of elementary education too are faced with this same problem of sharp increase in numbers of children and teachers with no increase in their staff to care for the added responsibilities. Supervisory personnel find themselves spread so thin they devote their time to administration or become "trouble shooters."

Children have progressed at varying rates in school achievement as long as schools have existed. But today three factors can be observed nationwide that are influencing many children's school adjustment and learning: (1) the migration of families from community to com-



munity and from state to state in answer to job opportunities for the parents; (2) the large number of mothers who have full-time jobs outside the home and who may fail to provide child supervision; (3) the large number of broken homes in which emotional disturbance can exist to the degree that the learning of the child is blocked.

### **Developing the Total Program**

Analysis of the needs of pupils, of teachers, and of principals indicates that the reading consultant has the responsibility for developing a sound reading program that has as its goal the improvement of the reading abilities of *all* pupils. Providing leadership and assistance in maintaining a strong developmental program will increase pupil efficiency in reading and at the same time prevent reading disabilities. But within the schools there will be children who are experiencing reading difficulty, and for them, there must be developed a program for identification, diagnosis, and specialized instruction.

Because of the evident variation in teacher and principal professional background, experience, and performance the reading consultant will need to plan work with the staff as a whole, with groups, and with individuals. But all such planning should be done with the staff, and the program should be based upon their indicated needs and interests.

One total staff learning situation may be a long-term in-service education program. In some instances the staff may decide to study the read-

ing process, its role in the total curriculum, and the needed sequential development of each facet throughout the grade levels. This may result in the production of an improved reading curriculum guide which will be of value not only to those who produced it but to later staff members. If a staff has a fairly broad and comprehensive background in reading, the decision may be to study some one area of the program intensively. An area that has been gaining in popularity for staff study has been the planning of enriched reading programs for bright, superior, and gifted children. Carefully planned and organized reading workshops provide valuable learning situations. Bulletins calling attention to new professional books, magazine articles, and to materials for children are helpful. Summaries of pertinent research increase teacher insight and knowledge. Arranging for the viewing of films, film strips, and other audio-visual materials helps to translate theory into practice.

In working with the teachers of one grade level or the teachers of one building the reading consultant will need to center attention upon specific teaching problems. The focus should be upon a sound theory translated into classroom practice which the teacher can apply in his classroom situation. Often a small group can be interested in undertaking an experiment which has as its goal improvement of instruction in some specific aspect of the reading program.

In promoting a strong developmental reading program the reading

consultant will need to direct particular attention to the first- and to the third- or fourth-grade levels. A sound kindergarten and first-grade program will do much to prevent many of the reading problems that show up later in the upper grades. Many of the teachers at this level need help in interpreting test results, analyzing pupil needs, in judging reading readiness, and in planning an instructional program geared to the abilities, needs, and interests of the children. The reading consultant needs to be on the alert to detect children who are either being pushed too fast or who are being held back. Emphasis on the concept of reading readiness has resulted in some teachers' insisting that all children progress through the same readiness program whether they need it or not.

Good education increases individual differences, and at the third- or fourth-grade level wide variation in reading competence can be readily observed. Here is an opportunity to screen out those children who, though not remedial reading cases, do not have the necessary sound foundation for strong growth. The reading consultant makes valuable contributions when: (1) he assists in identifying the lower third in reading achievement, (2) he assists in arranging the teacher assignment for their instruction, (3) he assists those teachers in making a study of individual needs, (4) he gives specific help in methods and procedures, and (5) he makes available adjusted materials not only in reading but in all content areas as well.

### Overcoming Reading Disability

The second broad area of responsibility of the reading consultant centers on those individual pupils whose reading difficulty is so great that carefully planned individualized instruction must be provided. Too often this condition has been interpreted to mean that the reading consultant shall assume full responsibility for the pupil's reading instruction. This can result in short tutoring periods given at intervals with no planned adjusted learning situation for the pupil within the classroom. The reading consultant cannot take the place of the classroom teacher. If the reading disability is so great that the reading consultant must give individual assistance, then he must plan with the teacher for the pupil's adjusted learning program throughout the school day. The individualized instruction of the reading consultant continues only until such time as the classroom teacher can assume full responsibility for the pupil's adjusted program of learning.

The reading consultant will need to develop with the teachers and the principals a workable plan that provides for: (1) identification of severely retarded readers, (2) study and organization of pertinent causal background factors, and (3) referral for diagnosis and recommendations. The reading consultant must have the professional training and ability to make a thorough diagnostic examination. This implies adequate facilities and clerical assistance to transcribe his reports. The reading

consultant needs to be acquainted with the services of all school and community resources if referral for further study needs to be made.

The report of his findings and recommendations are jointly considered with the teacher and the principal. If the disability is so great that intensive reading instruction is needed on an individual basis, the reading consultant sets up a schedule for working with the pupil at regular intervals, at the same time helping the teacher plan the adjusted classroom learning program. This intensive program should be discontinued as soon as the teacher can assume full responsibility for the pupil and has been supplied with the necessary materials at the pupil's learning level. The reading consultant will need to plan follow-up conferences with the teacher.

### **Staff Relationships**

The reading consultant does have a unique role, function, and contribution to make to any school system. In discussing his program, attention has been directed to the working relationships with teachers and principals. Of great importance, however, is his relationship to other supervisory personnel. If there is an elementary supervisor, consultant, or director of elementary or secondary education, then this person has the responsibility for the functioning of the total elementary or secondary education program. Therefore, it will be his responsibility to coordinate all special services including that of reading. He should be kept informed

of all programs planned for improvement of the developmental reading program and the reading status of the disability cases receiving instruction. At the same time, the reading consultant should have the professional freedom to plan and to implement a constructive program.

The job analysis of the responsibilities of the Reading Consultant indicates that this individual must have a broad background of professional experience and specialized training. If a superintendent and a board of education wish to add such service to the staff, the following criteria may prove to be of value in determining whether an individual has the necessary competencies.

**DOES THE READING CONSULTANT HAVE:** A sound foundation in child growth and development? Specialized training in developmental and remedial reading? A thorough knowledge of the tests and procedures needed to diagnose reading difficulty? Successful clinical experience in working individually with a retarded reader? A knowledge of the over-all total school curriculum with an understanding of the contribution of reading to it? Successful experience in classroom teaching? The ability to work well with an individual and/or groups of teachers? The ability to plan with and give specific teaching suggestions to teachers? A knowledge of resource materials in all curricular fields? A broad knowledge of children's literature? The ability to interpret the reading program to parents and to community groups?

## How Russian Children Learn to Read

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INDICATIONS that the Soviet educational system has been eminently successful in teaching children of varied backgrounds and abilities to read are found in the great interest that Russian people take in reading, and in the rising literacy rates in the general population. The methods and materials used in the Soviet Union are well worth considering, especially in view of current controversies concerning methods of teaching our beginners to read and write. Are there features of the Russian system that might well be adopted in our own schools, or methods that would be definitely disadvantageous?

Although I have never visited the Soviet Union, my frequent contacts with *émigrés*, the study of reports of observers and of materials used in primary reading instruction have provided background for the material included in this article. The recent report by the editor of the *Instructor* contains valuable information about the schooling of younger children in the Soviet Union. An excellent report has also been published by the United States government.\*

In Russia children enter the first

grade at the age of seven. Before that age many children have attended nursery school and kindergarten. Although they are not taught to read in kindergarten, they play games which prepare them for reading and arithmetic. Parents and children alike are reported to take a serious attitude toward schooling and the children are eager to learn. Emphasis is placed on training pupils to listen attentively, to accept and report what they have learned.

Although a few children learn to read informally before compulsory school age, the vast majority take their first steps in reading on entering the first grade. The children in beginning classes are seated at fixed desks arranged in rows with the teacher's desk at the front of the room. Blackboard space is provided only on the front wall. Homework is assigned from the first grade. Each child has his own textbook and keeps his assignments in a notebook which he always has with him.

### The Russian Language

Before launching into a description of methods in beginning reading, some points about the Russian language should be made, because the methods and materials of instruction are related to features of the spoken and written language. Russian is a flexible and euphonious language, far removed from English in

\*Mary E. Owen, "Education in the U.S.S.R.," *The Instructor*, 68, No. 5 (January, 1959), 49 ff. *Education in the U.S.S.R.* (Washington, D.C.: U.S. Department of Health, Education, and Welfare, Bulletin 1957, No. 14), pp. 67-70.



most respects, resembling more closely the classical languages with inflectional word endings and three genders, but having many morphemes common to English, German, French, and other modern languages. Word order in Russian is less important than in English because word endings often take the place of prepositions. Inflected endings take the place of articles, which are lacking in Russian. Consequently many common Russian words are longer than the corresponding English word forms, and more of the common words are polysyllabic. For example the imperative *Try* in Russian is a five-syllable word. *Stop!* also has five syllables. *Colt* is a four-syllable word. Fountain pen is also two words in Russian, but with a total of eight syllables. On the other hand, Russian expressions are more condensed. "Was it a valuable object?" is expressed in Russian with only two words. With few exceptions, each letter of a word is scrupulously sounded with its own distinctive character, soft, hard, or stressed, as the case may be.

Russian employs the Cyrillic alphabet, which has more resemblance to Greek than to Roman letters. Modern Russian is printed with thirty-three characters, ten of which are vowels, counting *ē* as a separate letter. Two of the characters, the hard and soft signs, are not actually independent letters but symbols which modify pronunciation of words. Russian spelling is regularly phonetic; each letter has only one sound, with very few exceptions.

There are no double letters with a single sound, no silent vowels, no letter groups with a single sound unlike the sounds of the letters in the group as in English *ch*. Hence the Russian alphabet more accurately represents the speech sounds than is the case in English. Cyrillic capitals differ from the small letters only in size, save for the letters *A*, *B*, and *E*.

### Looking into a Russian Primer

Typical of the first little primer used in teaching reading to beginners in the Soviet Union is the *Bookvar* or ABC book.\* Beginning lessons in reading, spelling, and handwriting are learned with this single book, which measures six by nine inches and contains ninety-six pages. The price in Moscow for the hard-cover edition is one and a half rubles, little more than the cost of a package of cigarettes here. One might say that this slender book packs more power than any other educational or cultural medium, since it opens to children the whole realm of reading and literate communication.

What are the contents of the book and how is it used with school beginners? The first few pages contain pictures in monochrome that might be thought of as promoting "language readiness." These depict farm and orchard at harvest time, assorted vegetables, fruits, flowers, farm and gardening implements. There is a picture of a baby flourishing a rattle,

\*A. E. Voskresenskaia, *Bookvar* (9th ed.; Moscow, 1952). The production of school-books is a monopoly in the U.S.S.R. Texts are prepared, published, and revised under state auspices.

which prepares for sounds in the first reading lesson; there are pictures of different toys, children at play, and various items of clothing.

Two-thirds of the book is taken up with a presentation of the separate letters of the alphabet. The letter introduced in each new lesson stands at the top of the page in large bold print in both capital and small letters. Handwritten letter forms are found only at the bottom of the page along with samples of handwriting strokes. Each alphabet letter-sound is introduced in real words and in lists of hyphenated words; then the letter-sound appears in words in short sentences, but without hyphenated syllables. The letter appears as the initial letter in short common words, and also in other positions within the words.

The letter *T*, for example, is introduced in *cat*, *Tom* (dog's name), and then in other one- and two-syllable words and names. The letter-sound of *R* is introduced in a child's name, *Roma*, first presented in hyphenated form, *Ro-ma*, then in several words in a row without hyphens, *Roma*, *Shura*. The pupil is given thorough drill in meeting each new letter-sound in all positions within common words, and in a variety of words. Thus the child learns that the letter always represents the same sound anywhere in the word. Each new letter introduced is combined with the letters presented in preceding lessons to form common words.

The letters are not introduced in dictionary order, but in order of frequency of use and convenience in

forming words the children know and use in conversation. The first two letter-sounds introduced are vowels, then comes a consonant, then another vowel, four consonants, another vowel, eight new consonants followed in the next lesson by the "soft sign," then other vowels, and so on, until all thirty-three characters have been introduced, each in a separate lesson unit. Consonants are not introduced without the vowels needed to form sounds in real words.

The letter *e*, sixth in dictionary order, is introduced as the twentieth letter; up to this point (Page 44) the children have met no words in the book containing this letter-sound. Letters less commonly used in words, several of which come last in dictionary order of the alphabet, are introduced last. The "hard sign," seldom used, comes last of all.

Throughout the book handwriting and reading lessons are coordinated. At the bottom of the pages are ruled horizontal lines crossed by slanted lines with samples of handwriting strokes, the new letters introduced, and words of the reading lesson in script form.

The words used to illustrate and practice the sound of each new letter are invariably hyphenated when they contain more than one syllable, for example, *ma-ma*, *let-ter*, *Do-ra*, *sug-ar*; but words are seldom hyphenated in the sentences that follow, and never in the reading context provided in the back of the book. In the 1930 edition of this same book hyphenation was indicated by spaces left between the syllables of a word,

but this arrangement must have been discontinued because of the confusion in responding to the unjoined parts: *Do ra, child ren.*

In the forepart of the book the print is large primer size, then it is reduced twice until there are about thirty-seven letter spaces in a full four and one-half inch line of print. The short sentences at first consist of three to five words in a line, gradually lengthening to full line width, with sentences broken at the ends of the lines. Paragraphs gradually grow longer toward the end of the book. Where two columns of sentences appear side by side on a page, words are hyphenated at the end of the lines. This seems bad for beginners because it breaks up the word pattern, an aid in rapid recognition.

The pictures appearing on every page to accompany words, text, and comprehension exercises are small but clear. In spite of the large amount of assorted material on a page, the pages do not appear crowded.

The last page of the book contains the thirty-three alphabet letters in dictionary order, both in capitals and small letters, in print and hand-script forms.

### **The Vocabulary of the Bookvar**

Mention has been made of the tendency to employ in the text common words typical Russian seven-year-olds know and use in conversation, among them names of objects and terms associated with nature—forest and field, flora and fauna, mushrooms, porcupines, and so on.

Vocabulary selection is not based on word-frequency counts or even primarily on child interest. Instead, words are introduced for the specific purpose of illustrating sounds in words and giving practice in letter-sounds in various positions within words. This results in the inclusion of words in a column that have no association in meaning, and words that are not always included in the text sentences that follow. Nor are all the sentences in a given lesson necessarily related, though some of the same words are used.

Later on, occasional words and abstract terms appear that the children have probably never heard or used. These words and the ideas they represent would need extensive explanation by the teacher. The vocabulary of the Communist Party "line" becomes more frequent toward the close of the book in the text accompanying pictures of Communist leaders, glimpses of collective farms and the city of Moscow.

What about word repetition, a carefully planned feature of primary grade readers for American children? In the Russian ABC primer there is virtually no systematic word repetition. After a given word has served its function of introducing and giving practice in a letter-sound, it may be repeated a few times, then never reappear. The word *Rama*, storm sash, a common object in Russia, illustrates the *R* sound. The word is introduced on Page 17, is repeated in singular and plural forms, reappears in a word-letter completion exercise on Page

18, is repeated again on Page 20, but it does not recur thereafter.

An odd note is struck by the three-letter Russian word for *whiskers* (or insect feelers), used along with other words to demonstrate a common vowel sound in terminal position. The word *whiskers* is illustrated by pictures of a fish and wasps with long feelers. The word appears again on Page 37 with the picture of a fierce looking beetle with prominent feelers. Then on Page 78 a mother prepares for the children's supper a fish with long whiskers. Perhaps the clue to this mystery is found in the three portraits of hirsute Soviet leaders which appear in the back of the book. Do the Russian seven-year-olds require readiness for bristling mustaches?

The book probably contains fifteen to eighteen hundred different words, not counting many derivatives, suggesting the earlier "uncontrolled" American primers. Toward the latter part of the book as many as a third of the words in a selection may be new. No doubt the typical pupil can by this time pronounce every sound in all positions in every one of the new words, but whether he understands every word is another question. This heavy vocabulary of new, seldom repeated words is a drawback because it might prevent the beginner from amassing a sight vocabulary rapidly and force him to fall back on a slow sounding-out process.

### Comments on the Text

The point was made above that practice in reading real words and

sentences occurs in every lesson, so that there is simultaneous practice in the mechanics of reading and recognition of sounds. Short paragraphs containing several sentences, little rhymes, and riddles serve this purpose. The themes relate to animal pets, farm animals, birds and forest creatures, field and stream, the seasons, gardening, beekeeping, family life, toys, plays and games, school life.

There is a charming picture of tots in a nursery school on a collective farm watering their flower garden, with the text below consisting of five simple sentences. Other pages depict kindness to animals, older children helping younger children, performance of useful tasks within the capacities of school beginners. The children can easily identify the characters with their own parents, brothers and sisters, playmates, and pets.

Social utility and labor themes pervade the book, beginning with harvest scenes, life on collective farms and in factories, workmen at their trades. There are sentences relating to health and foods. The stress is on youth trained for useful work. Toward the latter part of the book there are little anecdotes, fables, folk tales, and rhymes, each accompanied by questions to show comprehension.

The children's Communist organization of Young Pioneers figures briefly in the book. A picture shows seven- and eight-year-old children presenting a large bouquet to Comrade Stalin. The comprehension question at the bottom of the page asks, "Why are the children happy?"



Such material illustrates the exploitation of children's texts for instruction in Communist Party politics.

Following the learning of all the letter sounds, and as soon as a little fluency is gained, the children are given other books containing fables, folk tales, anecdotes, and passages from famous Russian writers. One example, *The First Reading Book*, has small woodcuts reminiscent of early schoolbooks in America. There is no vast supply of easy reading picture-story books such as we have in this country.

### Methods of Instruction

**Reading.** Here is an economical system for teaching reading with scarcely a wasted word or letter. The class lesson is the regular pattern; observers report that the lessons go off very well. Children give good attention during the painstaking drill which continues until reading habits are established. The Russians are fortunate in not introducing children to systematic reading instruction until they are seven years old. By this age speech articulation is nearer maturity, visual and auditory perception are more mature, spatial orientation and muscular coordination are better developed than at age six. Furthermore, by this age children's experiences are broader and they have a wider knowledge of common things. They can also give better attention to the teacher's questions and to the directions to be followed.

A strong feature is the gradual introduction of all the letter-sounds, coordinated with thorough practice

in all reading skills. Instead of drilling first on the entire alphabet or all the sounds, the child is led gradually, step by step, in his assimilation of new sounds, whole words, and mastery of reading mechanics. With this method it would be a dull child indeed who could not catch the "reading trick."

Instruction is primarily oral, conducted with the class as a whole. Russian educators are apparently not much worried about "silent reading for meaning" in this early stage; they assume that the children know the meaning of the words and phrases they are reading.

Uniformity in reading lessons must certainly simplify instruction, unfortunate as this may be in the last analysis. "This is the method. It works. Learn and use it with every pupil in the class." A uniform system can scarcely fit the wide range of cultural background among the people in all parts of the Soviet Union. Older, brighter pupils who catch on immediately must certainly be bored; and without small-group work, younger, slower learners have to be kept in after school for an extra dose of drill and be given excessive homework assignments. The story is that in the upper grades some 10 per cent are "left back," with poor reading a major cause of failure.

**Spelling.** With the consistent spelling of the Russian language and the articulation of each letter in a word, learning to spell is not much of a problem. The chief headache in written Russian is a grammar problem, learning the correct declensions of

nouns, pronouns, adjectives, and mastering verb endings.

Russian children take their first steps in spelling as they learn to recognize, to say, and to write the different letters of the alphabet. They then practice seeing, saying, and writing each new letter in words and phrases from the reading lesson. Thus learning to spell in the beginning stages is largely incidental. Occasional use is made of word-letter completion devices, for example, *C a* — (beside the picture of a cat).

There are exercises requiring the writing of words and sentences to match pictures, as well as answers to riddles and questions accompanying reading selections. The children respond to pictures by answering related questions, "What is this?" "Who is this?" "Write the words." This writing, which is graded each day, is done in the child's notebook.

In the back of the book is a sheet of anagrams to be removed and cut up so that each child has a set of printed letters, both capitals and lower case, to use for reading and spelling games.

*Handwriting.* Standard form in Russian handwriting requires the typical slant and linked letters of the old-fashioned italic script. Handwriting thus is as different from the printed letters as the Spencerian English script drilled in copybooks in American schools fifty years ago is from roman type. In addition, as in our handwriting, the Russian handwritten capitals are often quite different from the small handwritten letters.

Great importance is attached to neat, legible handwriting based on the patterns for letter form and slant provided at the bottom of each page that introduces a new alphabet letter. Practice with a steel point pen begins almost at once, after a little preliminary work with pencil. Observers report that by the second grade (age eight) the typical pupil writes beautifully with pen and ink. Drill is thorough and proceeds step by step, coordinate with the introduction of the different letters in the reading lessons. In every new lesson there is provision for practicing letter strokes, for writing the new letter, writing words containing the letter, and some writing of phrases or sentences. Observers report that all children are taught to write with the right hand.

Russian educators still attach middle-class values to perfect penmanship of the sharp slant, joined-letter style, just as we do here. Naive persons tend to identify cursive-style pen-point writing with being "educated," and teachers take pride in the child's attainment of neat, joined-letter script. Observers report that manuscript or print-style writing is not taught in Russian schools or used by teachers in preparing hand-lettered reading material. Would the angular Cyrillic-style letters adapt well to a rapidly written, unjoined handwriting style? The answer is decidedly yes. A study of handwritten Russian documents recently on display in the Columbia University Library proves that around 1900 and for a period of twenty years or so, eminent persons in the world of

Russian letters wrote their personal letters and prepared manuscripts for the press with unjoined, print-script handwriting.

*Evaluation.* One of the best features of the Russian system is that related skills are learned simultaneously in gradual steps with great economy in time and materials. Practice in writing the same words that occur in the reading lesson focuses attention on all parts of the longer words, particularly on word endings, which can be a source of confusion in the Russian language. Synchronized writing contributes to the development of the child's spatial orientation with respect to the letters, words, and sentences practiced in reading. The beginner learns by responding simultaneously with eye, ear, tongue and hand in a wide variety of exercises.

In reading instruction, too, there is integration of all aspects of the reading response: sounding which serves not only for independent attack on new words, but also for learning words; practice from the beginning in reading mechanics and eye-movements; and reading for meaning. The children quickly learn to recognize sounds in words, to discriminate among confusing words, and to catch the trick of "reading through" the longer words from left to right.

By the end of the exercises the typical Russian pupil is not only efficient in recognizing all the different letter-sounds within words, but he has learned incidentally to recognize a stock of several hundred common

words at sight. The child responds to the rhythm of sounds in words as he says them aloud, an aid to memory for prompt recall of word forms. With this combined approach, the children gain independence early and can work out the meaning of simple stories for themselves.

Would the Russian system be better if it included the use of experience charts and other hand-lettered texts commonly used in American schools for pre-book reading experience? There is no doubt that hand-prepared texts would greatly extend the amount of reading practice material and adapt reading practice more fully to the language and local experiences of groups of Russian children.

### Phonics

Observers report that the Russian system in beginning reading is "strictly phonetic." This term, however, can have different meanings, depending on the sequences in the steps followed in teaching reading. In the Russian system there are actually no separate phonics lessons or separate phonics drill periods, phonics drill books, exercises or gadgets such as one associates with phonics teaching in typical American schools. It would be more accurate to say that the Russian children learn to read by a phonetic-whole word-sentence method. Each new letter-sound is introduced at once in meaningful words the children can pronounce as soon as they know the sound of the new letter. Otherwise, a pupil might be entirely familiar with

a given letter-sound, e.g., *k*, but unable to pronounce it on sight in a word. The letter *G*, which is first introduced on Page 50 of the ABC book, the twenty-third letter presented, appears immediately in *Goosie*, in one other two syllable word, in a bird name containing the *G* sound, and in a three-syllable name. Drill is then given on eight words that begin with the *G* sound and twelve other words that contain this letter. Next comes a little two-sentence story about children playing a game, "Geese and Swans." The chant the rhyme:

Goosie, goosie!  
 Ga - ga - ga!  
 Want out in the meadow?  
 Da, da, da! (yes)

The third line in Russian also contains the *G* sound. At the bottom of this page there is synchronized writing practice of the small and capital *G*, and illustrations in handwriting of words in the rhyme. On the following pages the letter *G* recurs in old and new words.

There is no artificial drill on "duh," "stuh," "oo," "ih," etc., as a first step. Nor is there any artificial building up of words from an array of sounds, and then trying to blend the sounds together to say the word. There is no artificial distinction between "visual" and "auditory" word discrimination; the two aspects always occur together. All learning is by eye and ear in tandem; thus a firm link is established between the visual signs of words and their spoken counterparts. Pronouncing

the new letter-sounds in familiar, meaningful words reinforces memory both for the word and for the new letter-sound. Consequently the pupil is rapidly prepared to recognize many common words at sight without tedious sounding or letter calling, and also to sound out new words.

Is it ever desirable to form artificial and irrelevant associations between the shapes of the letters and their sounds? For example, *s* is a "snake," *m* is "the bear's sharp teeth," *i* is "a little boy and his cap flew off." The Russian system makes no use of this crutch; instead, association is formed solely between the printed symbol and its sound.

### Reading with Understanding?

Reading is an intellectual exercise governed by reasoning processes activated by the higher nervous system, not a mechanical process of articulating sounds. The task of associating each of the Russian alphabet letters with its own particular sound is simple enough for typical seven-year-olds, but this is still a long way from reading independence. Do the children learn to become "word callers" or do these lessons form correct reading habits? The answer can be inferred in part from the types of comprehension exercises provided with every lesson. There are picture-word matching exercises, questions to check comprehension of the longer reading selections, guessing games, riddles, and completion devices having some similarity to check exercises in our reading workbooks. The children cannot solve these puzzles



unless they can read with understanding. No doubt bright children with superior language background catch on more quickly than slow learners with less knowledge and experience to bring to the pages. Slow learners would need a longer time to grasp word meanings and the trick of efficient silent reading.

Some indication that typical Russian children do make this transition by the end of the primary period, the age of nine or ten, is found in the popularity of reading as an activity in afternoon club groups, and the wide circulation of children's library

books. There is an attractive picture in the ABC primer of children sitting around their library table at school enjoying the sharing of books and independent reading.

*In conclusion*, the Russians have evolved a system for teaching beginners to read, write, and spell which fits the language and maximizes learning with understanding. This analysis suggests that there are universal elements in effective methods. Teachers everywhere can profit from exchange of information concerning the methods and materials used for instruction in these basic skills.

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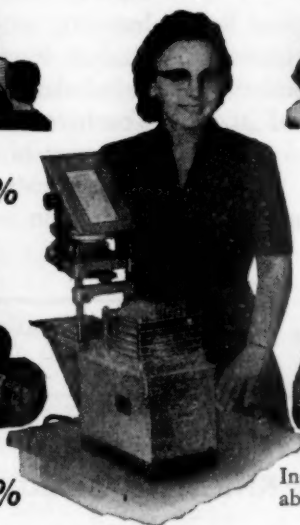
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# What RESEARCH Says to the Reading Teacher

BY

**AGATHA TOWNSEND**

*Consultant, Educational Records Bureau*

Reading research in which standardized tests are employed will be greatly facilitated by the recent publication of the fifth *Mental Measurements Yearbook*.\*

This column, of course, is not designed to provide for a book review; nevertheless, the volume in question will undoubtedly be used so widely by research workers that it seems worthwhile to consider it here. The purpose of these paragraphs is to outline some of the categories of information it contains, to analyze the sections of the work related most closely to reading investigations, and to suggest some procedures and some safeguards for its use.

The *Yearbook* is, in its primary purpose and use, an index which lists and reviews virtually every test available for commercial purchase. The 957 tests relisted in the fifth *Yearbook* include, for the most part, those issued or revised in the period of 1952 to 1958 in this country and other English-speaking areas. The basic reference information for each test is in itself of considerable help for test

selection. It includes listing of available forms, grade range, time requirements, test parts or major test scores, authorship, publisher, dates of publication, and cost. Even such standard data immediately clarify for the research worker the problems inherent in an investigation which might be undertaken with some tests—an insufficient number of forms to allow for retesting, lack of forms covering the complete grade range for an experiment, and so on. The next item in the entry for most tests permits the student of the test to consult articles and reports published in books and journals. References for older tests frequently require going back to previous editions of the *Yearbook*, but there is a good representation of research reports for the same years covered in the test listing.

The unique feature of the mental measurements yearbooks is the provision of evaluative reviews by test users and measurement specialists. Most tests are reviewed by at least two persons; certain tests, either because they are important publications in a well known series or because they represent areas of great controversy or rapid development in measurement, are reviewed by sev-

\*Buros, Oscar K., ed. *The Fifth Mental Measurements Yearbook*. Highland Park, New Jersey: The Gryphon Press, 1959. Pp. xxvii + 1292.

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eral authors. To one who has watched and used several of the Yearbooks, the development of reviews is a matter of considerable interest. In the 1959 book there seems to be less outspoken criticism of item details and considerably more tendency of reviewers to weigh the underlying assumptions on which tests are built. For the research worker this is significant and helpful. It reflects, one would conclude, the existence of tests which are far more adequate technically than was probably the case twenty years ago, but it also reflects the continuing existence of unsolved and important theoretical problems in testing. Thus, a given reading test may be granted full recognition for yielding dependable, reliable scores of word or sentence comprehension, but the reviewer can still question seriously whether these aspects of reading are adequately representative of the total aims of the reading program, or he can examine the contribution made by these sets of test items to the total picture of pupil skills afforded by the test.

If the tone of the reviews is more moderate than has been the case in some years, there is still evidence that reviewers have taken advantage of a number of the requests made by the editor that they should commend, censure, and seek to improve, and that they should feel free to name competing tests which they believe superior to the one reviewed. It is worth noting that a number of the reviewers actually report research which they have done with a test

in an effort to appraise it carefully.

The special section devoted to reviews of reading tests will probably be of particular interest. A total of eighty-four tests is listed, and about sixty of these are reviewed. Most of the omissions are accounted for by the listing of new forms of tests reviewed in earlier volumes. The teacher of reading should be reminded again of the fact that the *Fifth Yearbook* can best be used if earlier editions are also available for reference. Otherwise it might be misleading to find that such a widely-used test as the Cooperative Reading Comprehension Test is not reviewed in 1959. The volume reflects the practice of the publishers. A good number of the reading tests are part of elementary school achievement batteries, but most of these are available for separate purchase and are therefore separately reviewed. In the case of such tests, the reader should be urged to consult the reviews of the total batteries as well, because some of these reviews include more comment on norms, scoring, and interpretation than is included in the reading test entries.

The construction of the *Yearbook* makes use of the Classified Index of Tests (the last item in the book) a necessary activity. In addition to those reading tests reviewed under the separate heading and those covered in connection with achievement batteries, the Index makes clear the subdivisions for listing oral reading tests, readiness tests, interpretation of reading materials in special fields, study skills tests, and so forth.

Most reading research will require the use of tests in other fields. The control of intellectual factors, for instance, will send the research worker into the lists for intelligence tests. He will wish to note that in this volume, for the first time in the series, multi-aptitude batteries are listed separately, rather than appearing along with other group intelligence tests. The investigation of the outcomes of reading programs may send the researcher into the sections on subject matter achievement, literature, listening comprehension, or any one of a dozen other fields. Some workers will be interested in the greatly expanded section on measurement in the field of character and personality. In the 1959 volume over a hundred pages are devoted to projective tests of personality.

The introductory paragraph of this column cited as the third objective of this report the inclusion of some procedures and safeguards for the use of the *Yearbook*. It is tempting to be didactic about the procedures. First would come: read the Preface. The person facing the volume for the first time will be puzzled. If he reads the Preface, he will at least be reassured, and probably considerably helped to make his way through the next twelve hundred pages. He will find, for one thing, reference to a section of nearly three hundred pages which deal with books and reviews on educational measurement. For the moment, he may be relieved to note that this section is not required reading for him. Or, he may find that this part is just what

he needs before he selects his tests. He will, at any rate, find a clear explanation of the indexes to tests, publishers, periodicals, and authors. And he will, too, find himself introduced to the flavor of the book. If he is a real neophyte, he might try the experiment of reading reviews of the previous edition of the *Yearbook*, pages 990-998.

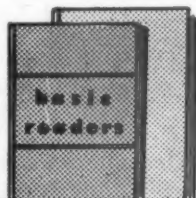
The second prescribed procedure: Beg or borrow a copy of the *Fourth Yearbook*, and locate a shelf that carries its predecessors. The great upturn in test publishing after World War II made the *Fourth Yearbook* an especially important one.

The third suggestion may perhaps qualify for the term "safeguard." Buros' book is an unparalleled reference. Its reviewers are courageous; often they are well known, well qualified, even eminent. But they are human, too. One reviewer has played a game of spotting his colleagues through their reviews before looking for their names. There is an even more important reason for the research worker to keep alive his own critical and analytical abilities. Only he knows just what his investigation will demand from the tests he wishes to use. His demands may be different from those of the reviewers, though he can profit from their point of view as well. In essence, test selection is not a science. It is to the credit of the *Fifth Mental Measurements Yearbook* to conclude that its contents are so important to the worker that full use of them will free him to make his own best choices on his own best grounds.

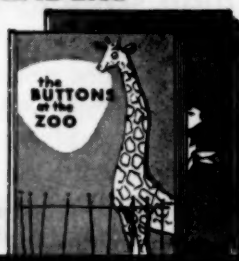
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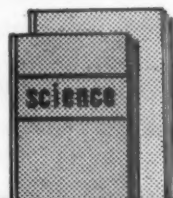
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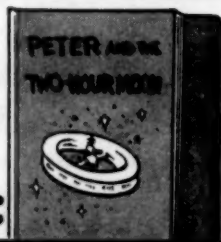
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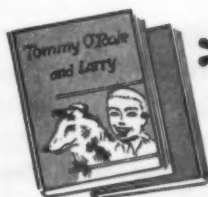


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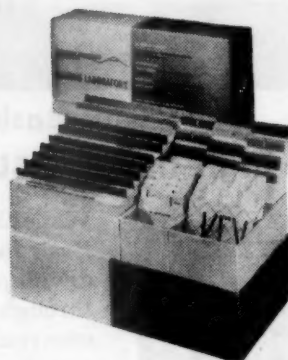
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## What Other Magazines Say About READING

BY

**MURIEL POTTER LANGMAN**

*Hawthorn Center, Northville, Michigan*

MCCLEARY, RUTH V. "Meeting Individual Reading Needs." *Elementary English*, May, 1959.

This article describes a remedial reading program set up in the elementary, junior, and senior high schools of Wooster, Ohio, in 1950. Screening and selection of children and content and method of instruction are reported briefly. Accompanying the remedial program was a supplemented developmental one. The program has been successful: "Our reading problems continue to diminish each year." From a school population of about two thousand, about two hundred cases are seen during each school term, and about thirty children receive individual instruction each summer. A reading supervisor and three teachers make up the special staff now on the program.

WITTY, PAUL A., and SIZEMORE ROBERT A. "Studies in Listening — A Postscript." *Elementary English*, May, 1959.

This article usefully summarizes what is known about the effective teaching of listening. Many excellent suggestions have been gathered, with a good bibliography of sources.

HILLENBRAND, ROBERT. "Appreciation of Picturesque Language in the Intermediate Grades." *Elementary English*, May, 1959.

This article is full of excellent suggestions for teaching.

AARON, I. E., GOODWIN, FRANCES, and KENT, VADA. "Fourth Grade Teachers Experiment with Cross-Class Grouping for Reading Instruction." *Elementary English*, May, 1959.

Three fourth-grade teachers set up a program in which each gave reading instruction to two relatively homogeneous groups made up from their combined classes. Each teacher had one up-to-grade group and one below-grade group. The range of reading abilities at the beginning of the experiment was from Grade 2.8 to Grade 7.6. Grouping was based on both standardized tests and teacher judgment.

After six months of the experimental program a re-evaluation showed a range of gains from 0.1 grade to 2.7 grades, with a mean gain of over ten months, and with only twenty-one out of 107 children gaining six months or less during the period. Some specific advantages of this method of grouping are enumerated.

BETTS, ALBERT EMMETT. "Phonics: Syllables." *Education*, May, 1959.

Dr. Betts summarizes the content of the phonics program with particular reference to the skills needed for auditory discrimination and visual recognition of syllables.

SLOVER, VERA. "Comic Books vs. Story Books." *Elementary English*, May, 1959.

A questionnaire of eighteen items, requiring ability to read and check responses, was used with the fourth-grade population of the schools of Mattoon, Illinois, to discover the reading interests of primary-grade children. There were 346 respondents. To the question "Do you read comic books?" 90 per cent of the children checked *Yes*. Boys preferred comic books to story books in a ratio of two to one, a ratio reversed among the girls. Poor readers preferred comics to story books in almost the same proportions. When the respondents were divided into three groups on the basis of high, average and low IQ scores (the name of the test used was not given) differences were less clear-cut. Reasons for preferring each kind of material were checked and tabulated. The types of stories enjoyed by the children are also given.

WILLIAMS, GERTRUDE. "Provisions for Critical Reading in Basic Readers." *Elementary English*, May, 1959.

After tracing the history of interest in critical reading through the development of reading instruction in the United States after about 1900, Dr. Williams discusses her investigation into methods of teaching critical reading with basic reader materials. Since critical reading must necessarily be dependent on ability to think critically, experience must be provided in such aspects of thinking as comparing and contrasting, drawing conclusions, evaluating conclusions, etc. Dr. Williams made a study of ten series of readers (text-

books and manuals), including all levels from preprimer through sixth grade, to find out which critical reading skills were taught. Only series written or revised within the past ten years were included.

Thirty-three different critical reading skills were taught in these basic series. Only four of the skills were represented in all ten series: drawing conclusions, making inferences, making judgments, and perceiving relations. Four of the skills appeared in only one series each: critical thinking, evaluating the author's attitude, evaluating summaries, and research. Simple reasoning skills were emphasized at the lower grade levels, complex skills at the upper levels.

The findings are summarized in detail at the end of the article. A number of implications for teaching are given. There is an excellent bibliography.

HAMPLEMAN, RICHARD S. "A Study of the Comparative Reading Achievements of Early and Late School Starters." *Elementary English*, May, 1959.

After reviewing the related research Dr. Hampleman describes a study comparing two groups of first graders. One group was made up of children who entered first grade at six years, three months, or younger; the other group comprised children who entered first grade at six years, four months or more. Evaluation of reading achievement was carried on when these children, who entered school in 1947, had completed the sixth grade.

The mean reading achievement of the "older" group of first graders was slightly more than four months higher than that of the "younger" group; the

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median of the "older" group was seven months higher. Intelligence quotients for the two groups were substantially the same. When the youngest and oldest quarters of the total group were compared, the differences became more striking. The mean of the oldest quarter was almost seven months higher than that of the youngest quarter, and their median was eleven months higher. The investigator points out that it appears to be an advantage to be one of the older first graders. The higher the intelligence quotient of the child who enters first grade early, the greater is the likelihood of success, other things being equal.

Since the differences between the groups described above, though consistent, were not statistically significant, a study with larger numbers of children is now in progress.

HORN, THOMAS D. "Periodicals for Children and Youth." *Elementary English*, May, 1959.

This annotated list of seventy-two titles gives publication information and content, but not costs.

STAUFFER, RUSSELL G. "Individualizing Reading Instruction—A Backward Look." *Elementary English*, May, 1959.

Dr. Stauffer points out that a serious recommendation for individualized reading instruction is to be found in the 1923 Yearbook (Part II) of the National Society for the Study of Education, *Adapting the Schools to Individual Differences*. The companion volume for that year was *A Report of the National Committee on Reading*. Three principles of growth from Part II, which he quotes, are as valid now

as then, though, he comments, most of our present knowledge of individual growth and development was still to be obtained. From Part I he quotes A. A. Sutherland: "Individual differences among children, while disturbing to a system of education which tries to ignore them, are potentially the means by which human society may progress." (I remember attending a lecture in an undergraduate psychology class at Barnard in 1922-23, in which the same point, brought out by Dr. Harry L. Hollingworth, made an indelible impression on me. Remembering that Leta Hollingworth, H. L.'s wife, initiated the important work in teaching exceptional children, both gifted and slow, in the decade 1930-40, it seems to me that we have here a superb example of educational lag of the forty-year variety.)

Dr. Stauffer traces expressions of the recommendation for individualizing reading instruction from 1888 through discussion of methods used from that date into the early twentieth century. Already, in the 1923 yearbook on reading, the same methods questions were being asked that teachers are asking today. In that yearbook Carleton Washburne described the Winnetka Plan and suggested some answers to some of those questions. Dr. Stauffer feels that it is encouraging that only thirty-five years (an extended quarter of a century) have elapsed since these recommendations were made, and already we are beginning to put them into practice! This article should be read to be fully enjoyed and appreciated.

GREENMAN, RUTH, and KAPILIAN,



SHARON. "Individualized Reading in Third and Fourth Grades." *Elementary English*, April, 1959.

These writers describe a year of individualized reading instruction — preparation, methods, and results. During the spring preceding their experimental year the two teachers prepared by visiting and observing classrooms where similar programs were successfully operating. Late in the same spring they inaugurated a pilot study, introducing the idea of individual reading programs to the children in their classes through the formation of Book Clubs. They built up classroom libraries (the school library was not adequate) from their own and children's contributions. During the pilot study children and

teachers became enthusiastic, and a full year's experimental program was planned.

Readers will find information regarding methods of assessing individual reading ability, the daily instruction plan, individual conference periods, seatwork, skills instruction, sharing periods, and record keeping. The experimenters were rewarded by the children's exceeding expectation in reading achievement.

MAIB, FRANCES. "A Suggested List of Literature Books." *Elementary English*, April, 1959.

This annotated list is especially useful because the titles are arranged in a graded list, covering the first through the sixth grade.



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## Interesting BOOKS for the Reading Teacher

BY

**HARRY T. HAHN**

*Oakland County Schools, Michigan*

### **Current Elementary School Philosophy and Practice**

DUTTON, WILBUR, and HOCKETT, JOHN. *The Modern Elementary School*. New York: Rinehart, 1959. Pp. 524. \$5.50.

This new text was designed primarily to acquaint prospective teachers with the philosophy, curriculum, and current instructional practices of our elementary schools. It is likely to be of interest also to some experienced teachers who are concerned with the changes being made in teaching methods as well as in the curriculum. The text is divided into three parts: (1) the organization in the elementary school, (2) teaching specific subjects, and (3) guiding individual progress.

Materials and experiences incorporated in the text are drawn freely from the fine educational programs developed in the vicinity of Los Angeles, California. Teachers who have used films and film-strips prepared in southern California will recognize some of the content. Many of the ideas on reading, writing, and spelling, presented with specific, illustrated detail, are provocative and deserve attention.

The authors often cite classroom programs to keep a this-is-the-way-you-can-do-it theme constantly before the

reader. The interesting guides to creative and practical writing present a positive and personal approach to learner competencies in this difficult area. Inexperienced teachers will discover that this text can provide an excellent resource for the first few years of teaching.

### **A Remedial Reading Handbook Revised**

KOTTMAYER, WILLIAM. *Teacher's Guide for Remedial Reading*. St. Louis: Webster Publishing Co., 1959. Pp. 264. \$4.00.

Although much of the content of this guide is new, this text is essentially a revision of the *Handbook For Remedial Reading* written by the author ten years ago. As in the early edition, the reader might appreciate the brevity and dispatch with which the author discusses different approaches to diagnosis and to teaching methods.

Dr. Kottmeyer draws his materials and practices from the experiences of the unique St. Louis public school reading clinics, which have persisted in operation for more than twelve years. He describes the use of the many materials (distributed by the Webster Publishing Company), which he has prepared for schools.

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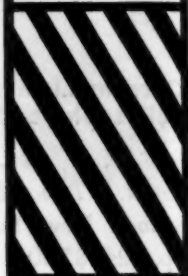
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lems the author identifies many tests which would normally be available in clinical programs. However, he also presents and describes interesting informal reading and spelling devices which could be used by classroom teachers. As in his *Handbook*, problems in word perception are treated extensively. Particular emphasis is given to a single letter phonics system which he has found helpful in the St. Louis remedial programs. Comprehension exercises, supplementary reading resources, mechanical devices, and other useful tools for the remedial teacher are described.

Most of the material in this guide is probably familiar to teachers who have been conducting corrective or remedial programs. However, it should prove a valuable handbook for schools which are endeavoring to start differentiated programs for children who have a very difficult time mastering basic reading and spelling skills.

### **A Guide to Studying Children**

ALMY, MILLIE (From materials prepared by Ruth Cunningham and Associates). *Ways of Studying Children, A Manual for Teachers*. New York: Teachers College, Columbia University, 1959. Pp. 226. \$3.50.

One way for primary teachers to increase their understanding of the way children feel, behave, and think is to engage in independent child study. This manual offers a comprehensive guide to techniques and approaches developed and tested by experienced teachers. It also suggests a guide for the development of practical research projects.

An outline of certain basic steps in finding answers to children's problems is suggested: (1) Identify the problem, (2) Develop hunches about causes and possible solutions, (3) Test your hunches by trying them out, seeing what happens, and generalizing on the basis of evidence.

The manual offers interesting suggestions for observing children, studying them in groups, asking them questions, studying ways they express themselves, and using outside resources such as parents.

### **How to Compute a Reading Index**

LORGE, IRVING. *The Lorge Formula for Estimating Difficulty of Reading Materials*. New York: Teachers College, Columbia University, 1959. Pp. 20. \$.75.

The Lorge formula, designed to appraise the relative difficulty of printed and spoken texts, is presented simply and directly in this brief pamphlet. It is complete with copies of the Work Sheet, a passage illustrating methods of computing a Reading Index, and the Dale List of 769 Easy Words.

The Reading Index is applicable for elementary as well as adult material. The basic data for computing readability include: number of sentences, number of prepositional phrases, and number of hard words in the sample. This pamphlet could be a useful teaching tool.

### **About Phonics**

HERR, SELMA E. *Improve Your Reading Through Phonics*. Los Angeles: California Visual Training Associates. Pp. 50. \$1.00.

This workbook was designed for secondary students who have difficulty with word recognition. The approach is direct and uncomplicated, and the author treats one basic element at a time. She tells the student what he should know and then provides exercises to put across the idea. A key to the correct responses is included so that the book can be used as a self-help text. The content might be of interest to secondary teachers who want to review their understanding of phonics and structural analysis.

### Improving Oral Communication

MUNKRES, ALBERTA. *Helping Children in Oral Communication*. New York: Teachers College, Columbia University, 1959. Pp. 102. \$1.50.

The author gives the elementary teacher many useful suggestions for oral communication through: conversing and discussing, storytelling, reporting and making speeches, dramatizing, and using words well. The pamphlet is No. 19 in an excellent series entitled *Practical Suggestions For Teachers*, edited by Alice Miel.

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### **Elementary School Library Conference**

Recognition of the pressing need for improving and enlarging elementary school libraries has sparked the forthcoming (as this is being written) conference on elementary school libraries on November 5, sponsored by Drexel Institute of Technology. The program is planned to stimulate and inform parents and members of school boards, as well as

school personnel. In the keynote address Dr. Muriel Crosby, Associate Superintendent of Schools, Wilmington, Delaware, will discuss "The Role of the Library in the Modern Elementary School." A symposium and discussion groups will take up practical problems in establishing libraries and improving those in existence. The conference will conclude with a dinner meeting at which Nancy Larrick will talk on the subject, "You Need Good Libraries to Teach Reading Today."

The organizing of such a program to inform the public of changes in elementary school instruction and the resultant necessity of appropriate and accessible reading materials is a public service that might well be carried out by other groups. A large part of our population studied under a "one textbook per subject" program, and our people are not likely to demand or support a good elementary school library unless they are given an opportunity to see its purpose and values.

### **Outstanding Books**

Since its initiation the *Bulletin of the Center for Children's Books*, published by the University of Chicago, has been a source of discriminating evaluation of new books. Now Mary K. Eakin, a former editor

of the Bulletin, has compiled a bibliography of a thousand outstanding children's books published in the last ten years. This book will be helpful to school librarians, and particularly helpful to teachers who are building libraries in the classroom to give pupils more choice in a program of self-selection in reading. For each book listed there is a short description, suggested reading level and interest level, suggestions for use in the school curriculum, and an evaluation. Entries are arranged alphabetically by authors' names. In addition, there is a helpful subject-title index. Mary K. Eakin. *Good Books for Children*. Chicago: University of Chicago Press, 1959. Pp. 368. \$5.95.

### Reading in the Junior High School

The English teacher in the junior high school is often prepared to teach high school English, but finds the teaching of reading required at the junior high school level a difficult and sometimes disturbing task. The teacher of reading at this level will find help in a recent publication which grew out of the work of a study-group of teachers who faced their inadequacies and did something about them. Mrs. Margaret F. Willson and Mr. J. Wesley Schneyer served as consultants with representatives of the South Penn School Study Council, University of Pennsylvania. Their report tells what aspects of the program were taken up at each meeting, furnishing not a blueprint but a guide to others who might wish to participate in a similar study. Other sections of the report

deal with staffing and teacher training, organization of a junior high school developmental reading program, and a bibliography. This last section includes the best of the older and of the most recent materials for pupils and for teachers, and will serve as a valuable reference to instructional materials for the junior high school reading program. Margaret F. Willson and J. Wesley Schneyer. *Developmental Reading in the Junior High School*. Danville, Illinois: The Interstate Printers and Publishers, 1959. \$1.50.

### Atlases

When reference materials are purchased for school classrooms or elementary school libraries, too often the purchase of up-to-date atlases is neglected. The C. S. Hammond Company has some new publications which should be looked into. *My First World Atlas* is planned for individual student use in social studies. It includes practice materials designed to develop map-reading and comprehension, relief maps for reference, world environment maps, an album for land types, American History maps and World History maps. The *Atlas of the Bible Lands* is also planned for individual student use, and includes maps, illustrations, and a graphic time chart of Bible History. *My First World Atlas*, \$45. *Atlas of the Bible Lands*, \$50.

### Boys' Books

"Explore with Books" is a list which the compilers call "a smorgasbord" culled from the book reviews



in *Boy's Life*, the magazine of the Boy Scouts of America. This brief list includes books of adventure, sports, biography, science and space, and how-to-do books. Brief annotations accompany each title. "Reading," *Boy's Life*, New Brunswick, New Jersey. Single copies are free with stamped, self-addressed envelopes. Lots of five or more at \$.02 each.

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## PRESIDENT'S REPORT

BY

**A. STERL ARTLEY**

*President, International Reading Association*

I feel impelled to begin this letter as we do many times in writing to our friends while on vacation—please pardon a hurried letter! The preparation of this message was postponed until after the meeting of the Board of Directors of the IRA in St. Louis on October 3.

I am happy to announce that plans are well under way for the annual meeting of the Association on May 6 and 7, 1960, in New York City. On Friday preceding the meeting of the board, Dr. Austin (your president-elect), Dr. Spache (past-president), Dr. McCallister (executive-secretary), Miss Dietrich, (co-chairman of the New York local arrangements committee) and your president met as a planning committee to select a conference theme and to consider the over-all plan of the meetings.

The conference theme agreed upon was New Frontiers in Reading. The theme will be introduced in a general session on Friday morning, May 6, by two outstanding speakers—one from the field of reading and the other from an allied field. Group meetings on Friday afternoon, Saturday morning, and Saturday afternoon will deal with three frontier areas—differentiating instruction to provide for the needs of children, reading as part of the total curricu-

lum, and reading and mental health. The convention luncheon will be held Saturday noon, as in the past with two authors of children's books as speakers. The business meeting of the Assembly of Delegates is scheduled for Thursday night, May 5. The two-day conference will be preceded on Thursday by a one-day pre-conference meeting for those with specialized interests in reading. Details of this meeting as well as details of the main conference will be announced in subsequent issues of *THE READING TEACHER*. From the above you will observe that no conference activity is being scheduled for Friday evening. Because New York offers so many opportunities to attend plays and other cultural events the committee felt that one evening should be held free for conferees to use as they wish. We hope you will like this idea.

Space will not permit a detailed summary of the meeting of the Board of Directors. Suffice it to say that as a result of your efforts the International Reading Association continues to grow. Dr. Strong reports that as of September 1, 152 councils were carrying on IRA work: two in Australia, 35 in Canada, one in Germany, and 114 in the United States. Of this number, 17 were added between May and September.

The financial condition of the organization also continues to be healthy. At the board meeting Dr. Nila B. Smith was asked to assume responsibility for considering ways in which surplus funds could be used to the advantage of the membership. If you have an idea as to how IRA might better help *you* as a member, Dr. Smith will appreciate having your suggestion.

Suggestions for nominations for president-elect and directors will be

welcomed by the elections committee. Please send names to Dr. A. J. Harris, Chairman of the Elections Committee, Queens College, Flushing, New York. Accompany your suggestions with statements of the qualifications your nominees possess.

By the time you read this letter the Christmas season will be approaching. It is the sincere wish of all your officers that you will have a joyous and restful holiday, and that the New Year will be a rewarding one.

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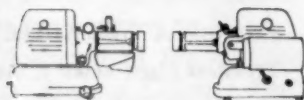
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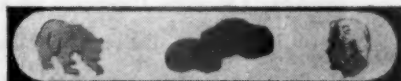


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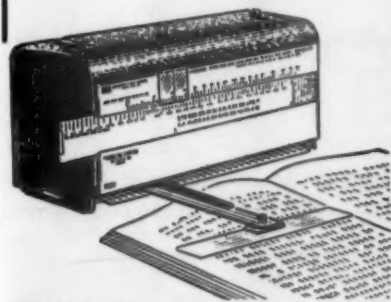
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